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(APRIL 6, 1889, PAGE 688)

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FEBRUARY 1, 1889.

CONTENTS OF NO. 2, VOL. IV.

Editorial Notes:—"Intercolonial Reciprocity"; "The Pharmaceutical Society of New South Wales"; "Colonial Degrees in England"; "Homoeopathic Medicines"; "Join your Society."

COLONIAL REPORTS.*New South Wales.*—Pharmaceutical Society (Official Report of Monthly Council Meeting); Examination Papers of the Pharmaceutical Society; Local and Trade News.*New Zealand.*—Pharmacy Board (Report of Ordinary Meeting); The Midland Pharmaceutical Association of New Zealand (Official Report of Monthly Meeting); Decisions of Customs Department; General and Trade News.*Queensland.*—Pharmacy Board (Official Report of Monthly Meeting); Pharmaceutical Society (Official Report of Council Meeting); Trade News and Local Intelligence.*Tasmania.*—Report of Meeting of Hobart Chemists' Association; General and Trade News from Hobart, Launceston, &c. &c.*South Australia.*—Pharmaceutical Society (Official Reports of Council and Annual Meetings); Trade Notes and Miscellaneous Items.*Victoria.*—Pharmacy Board (Reports of Meetings Held November and December, 1888); Examination Papers for the Certificate of the College of Pharmacy, Melbourne; The Pharmaceutical Society (Reports of Meetings); Intercolonial Medical Congress of Australasia (Report of Second Session, when various Papers were read, and an Address on Pharmacology was delivered by Baron F. Von Müller, K.C.M.G., a full Abstract of which is given); Trade Notes and General News.

Dispensing Notes; Births, Marriages, and Deaths; The Melbourne Centennial International Exhibition (Jury Awards).

Student's Corner (Analysis of the 26th Competition).

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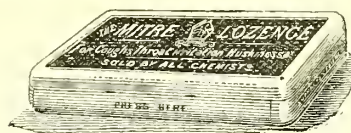
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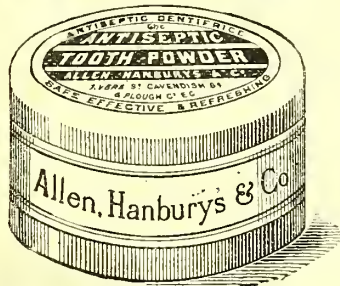


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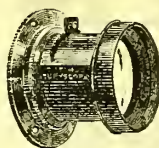
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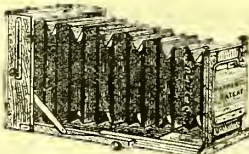
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OFFICES: 42 CANNON ST., LONDON, E.C.

EASTER HOLIDAYS—IMPORTANT NOTICE.

Advertisements to appear in the next issue of this Supplement must reach our Office not later than first post on Thursday morning, April 18th.

The Offices of "The Chemist and Druggist" will be closed after Thursday, April 18, until Tuesday, April 23.

42 Cannon Street, April 13, 1889.

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THE Proprietor of two businesses in London, S.E. district, is desirous of disposing of same, together or separate; suit beginner; very profitable; illness sole cause of disposal; price £45 and £125; rent £25 and £50; capable of great improvement. Apply, by letter S., care of Mr. Beams, 39 Hardcastle Street, Peckham.

LONDON, S.W.—Dentist, Chemist, and Botanic Practice; old-established; main road; rent £55, on lease; good house and shop, well stocked, &c.; returns about £400; cash price £250, including valuable proprietary articles; a bargain; cause of leaving, death. Address, "Botanic," Walker & Troke, 82 City Road, London.

FOR £200, a genuine and profitable Mixed Business in large country parish; population 2,200; no opposition; lock-up shop; low rent; satisfactory reasons for disposal, and no concealment; good introduction given. For full particulars apply, with references, to "East Midlands," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ISLE OF MAN.—No examination necessary; genuine Retail and Prescribing Business; fully stocked, handsomely fitted shop in thorough working order; returns nearly £600, full prices; no cutting; present owner leaving the island; investigation solicited; good introduction given on an immediate cash purchaser. Apply, 215, A. & S., Duke Street, Liverpool.

£1,400 RETURNS.—First-class Retail and Dispensing, in fashionable high-class seaside resort, South; 4,000 new prescriptions per annum; vendor retiring; price, including valuable lease, about 30 years, £1,400. Applicants, by enclosing reference, can have further particulars of F. J. Brett, Valuer, 60 St. Stephen's Road, Leicester.

WESTERN County.—Retail, Prescribing, Agricultural, profitable Proprietaries, Wines and Spirits; returns about £1,350 (cash taken £1,000); valuable stock; beautiful country; nice house; good premises; garden; rent and taxes low; lease; satisfactory reasons; good introduction; price £950; no agent. Apply, with reference, "Antipyrin," 21 Shore Road, South Hackney, London.

MR. THURGOOD has for transfer:—**SOUTH WALES**.—Death vacancy; returns £500; very profitable; valuation only, less than £150. **ANOTHER**.—Returns £1,500; proprietor retiring, after 25 years' successful occupation; cash £1,000. **WEST OF ENGLAND**.—Fashionable town; returns nearly £1,000; offer wanted. **MIDLANDS**.—Returns £400; only £100. Please apply, Albert Chambers, Swansea.

OLD-ESTABLISHED Business, Midlands; best position progressing town; chance for pushing man; rent low. Branches—Midlands neighbourhood; rapidly increasing to £8; nearest Chemist mile; £20 rent, &c. Kent.—Nearest Chemist 6 miles; £16 rent, &c.; has done £12. Both under management, proprietor having appointment. "Cherrieus," Mr. Greenwood, Pittville House, Lea Bridge Road, Clapton.

YORKSHIRE.—Good Family Retail and Light Agricultural Business; mostly ready money; situated in the best part of a large, healthy, increasing, and fashionable market town; the shop, house, and premises are large and commodious, and well fitted for carrying on an extensive business; private yard and garden; established over 80 years, in present hands over 19; the freehold can either be purchased or a lease can be had on very reasonable terms. For further particulars apply, M. P. S., 7 Louis Street, Leeds.

BUSINESS WANTED.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

See Notice on Front Page of Supplement.

LIGHT Retail and Dispensing Business, with a net profit of not less than £300 per annum; Assistantship with view to purchase preferred; cash ready. Full particulars to "Verax," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

FOR SALE.

TO Chemists and Druggists.—For immediate sale by order of the Official Receiver in Bankruptcy, capital modern Fixtures, Fittings, Trade Utensils, and Stock of Drugs, together with the nucleus of a rapidly growing Business; good premises in main thoroughfare, first in importance and traffic; rent £60; price £150. Apply to John Miller, Auctioneer and Valuer, 37 and 38 the Market Place, Reading.

TENDER.*3s. 6d. for fifty words; 6d. for every 10 words beyond.*

See Notice on Front Page of Supplement.

BIRMINGHAM FRIENDLY SOCIETIES' PROVIDENT MEDICAL INSTITUTION.

TO WHOLESALE DRUGGISTS AND MANUFACTURING CHEMISTS.

PARTIES desirous of Tendering for supplying Drugs to the above Institution must send Price Lists and Terms to F. Girling, 73 Great Hampton Street, Birmingham, on or before Thursday the 13th inst., endorsed "Tenders for Drugs." All Drugs must be of the best quality, and the probable quantity required would be about £230 per annum.

JEREMIAH THOMAS, President.

TO LET.*3s. 6d. for fifty words; 6d. for every 10 words beyond.*

See Notice on Front Page of Supplement.

EAST DULWICH—To Chemists.—To be Let, a capital Shop and five-roomed House; rent £30; good opening for above. Apply to Messrs. S. Walker & Rüntz, 22 Moorgate Street, E.C.

SHOP and House to Let, in main road; splendid position; bus and tram pass door; good opening for chemist or tobacconist and hair-dresser. Apply, S. Jones, Builder, 156 High Street, Willesden Junction.

BRIGHTON (West).—To be Let, capital Shop and Six Rooms; rent £40; this is an excellent opening for chemist and druggist, for which purpose the shop will be fitted; centre of populous working-class district; no opposition. Apply to Messrs. Gimblette & Mead, Auctioneers, &c., 103 Church Road, Brighton, W.

TO be Let, with immediate possession, owing to the death of the late proprietor, a Shop, plate-glass front, and house, side entrance, of an old-established Chemist and Druggist's Business, in a small borough town in the West of England. Apply, E. A., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

PARTNERSHIP.

PARTNERSHIP in good-class Dispensing and Family Business, with a view to succession on mutual terms; first-class references; no agents. Full particulars of "Partner," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

APPRENTICESHIPS.

TO Parents and Guardians.—J. Christie, Dispensing and Family Chemist, 62 Northcote Road, Clapham Junction, S.W., has a vacancy for a well educated Youth as an Apprentice; moderate premium.

AS Apprentice.—Gentlemanly youth seeks vacancy in a good-class dispensing business; aged 16; height 5 ft. 9 in.; passed Prelim.; premium; Liverpool preferred; state hours. Price, 24 Brickfield Road (North), Liverpool.

SITUATIONS OPEN.*3s. 6d. for fifty words; 6d. for every 10 words beyond.*

See Notice on Front Page of Supplement.

WANTED, a Young Man for Packing and Putting up Stock; outdoors. Apply, stating full particulars, to D. P. Roberts, Chemist, 131 North End, Croydon.

WHOLESALE Drug Trade.—Wanted, a Junior Invoice Clerk; previous experience indispensable. Particulars to "Druggist," 25 Charles Street, Hutton Garden, E.C.

WANTED, an Assistant; qualified; must be well recommended. Apply, stating age, salary required, reference, enclose photo, to be returned, to Mrs. Hall, High Street, Kelvedon, Essex.

WANTED, Assistant with Minor qualification; one used to mixed trade. State salary (to live out) and references, &c., to Box 26/73, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, after Easter, qualified Manager (indoors), married preferred, to take sole charge of Branch; must be well up in prescribing. Write, with full particulars, to F. E. Lambert, Anlaby Rd., Hull.

WANTED, immediately, a good Junior; must be well accustomed to Store trade and a good Salesman. Apply, with full particulars, age, height, experience, salary required (outdoors), Lewis, 87 Fishergate, Preston.

WANTED (in London) a gentleman for Part Time work; evenings. &c.; must be acquainted with chemistry and allied sciences, and write shorthand. Apply, by letter, to H. Helbing, German Hospital, Dalston.

WANTED, at once, Junior Dispenser, Drug Department, Haymarket Stores; outdoors; hours 9 to 7; Minor qualification. Apply, by letter only, stating salary required, &c., to The Chemist, 28 Haymarket, S.W.

TO DISPENSERS.—Wanted, at once, a qualified Dispenser (outdoors); must be under 35 years of age; no Sunday work. Apply, by letter, stating age, experience, and salary required, to G. C. A., 136 Queen Victoria Street, E.C.

AN Improver or Junior Assistant; soon; indoors. Apply, stating age, height, salary, when disengaged, with photo, to be returned. Abstainer, and have passed the Preliminary. George Windeatt, Welling-ton, Somerset.

DISPENSER; immediate; outdoors; qualified; must be quick and thoroughly reliable, and well recommended. Apply, stating age, height, references, salary required, and enclose carte, Wand's Drug Store, Haymarket, Leicester.

ASSISTANT (outdoors) immediately; competent to take charge of and develop a business in a working-class neighbourhood; salary to commence 30s. a week; must have good references. Apply, "Chemist," 104 Farringdon Road, E.C.

WHOLESALE Assistant, with Laboratory experience, wanted for South Africa; age about 25; three years' engagement, and passage paid out. Apply, by letter, giving full particulars as to experience, &c., L., 14 Bunhill Row, London, E.C.

WANTED immediately, Improver or Junior, about 18 or 20 years of age, in light retail and dispensing establishment; must be agreeable to make himself generally useful. Apply, J. Onion, Villa Cross Pharmacy, Handsworth, Birmingham.

WANTED, an energetic Assistant; outdoors; must be quick active and a good counterman; one used to a pushing business preferred; qualified. Send photo (to be returned), and state salary required, references, height, age, and full particulars, to 10 Tontine Square, Hanley, Staffordshire.

A COMPETENT and gentlemanly Assistant (indoors), with Minor qualification; one accustomed to first-class Dispensing and light Retail; preference to one seeking a permanency. Apply, stating salary required, height, references, &c., enclosing carte, to Cousins, Thomas & Co., Chemists, Oxford.

FOR China, immediately; qualified Junior, aged 22-24; first-class experience and references indispensable; state particulars in full detail, and if living out of London mention a London reference who might be interviewed. Address T333, Messrs. Deacon's Advertisement Offices, 154 Leadenhall Street, E.C.

IMMEDIATELY; Assistant, Junior, between 21 and 25; light cash Retail; sound references required; competent to take charge when required; Dispensing, Prescribing; hours 8.15 A.M.—10.0 P.M.; partial Sunday duty. State age, height, experience, salary, send photo, Matthews & Son, Chemists, Post Office, Cambridge Road, E.

CIVIL Service Commission.—Forthcoming Examination, Assistant to the Professor of Chemistry at the Royal Military Academy, Woolwich (25-30), 26th April. The date specified is the latest at which applications can be received. They must be made on forms to be obtained, with particulars, from the Secretary, Civil Service Commission, London, S.W.

CHEMIST'S Manager wanted immediately for the Isle of Man; married and abstainer preferred; to reside on premises; must be a good counterman and have bad experience, and must be prepared to give first-class references. Send full particulars, number of family, if any, also photo, to "Cornus," care of Messrs. Evans, Sons & Co., Hanover Street, Liverpool.

SITUATIONS WANTED.*1s. for twelve words; 6d. for every six words beyond.*

See Notice on Front Page of Supplement.

JUNIOR, for few weeks; salary no object. "A.", 34 Powerscroft Road, Hackney, E.

ASSISTANT or Dispenser; Surgeon or Chemist; married; qualified. E. R., 35 Bond Street, Swansea.

ASSISTANT or Manager; aged 27; Minor West-end experience. G., 8 Woodstock Road, Oxford.

JUNIOR (23), in good-class Business; good counterman. A. H. S., 60 Welch Row, Nantwich.

MANAGER for Branch; 20 years' experience; highest testimonials. Wilkins, Seckford Road, Woodbridge.

MANAGER (Temporary); moderate terms; Ph. Chemist; long experience. X., 39 Powes Square, Bayswater.

JUNIOR (20); 5 years' experience; outdoors preferred; disengaged. "Pharmacy," 7 Westbourne Terrace, Grimsby.

WHOLESALE; 7½ years' experience; Retail and Wholesale; aged 23; good references. F. Leaf, High Street, Clay Cross.

ASSISTANT; Mixed Business; Devonshire preferred. S. E., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ASSISTANT (26); outdoors preferred; 4½ years in present situation; personal interview. B., 85 High Street, Whitechapel, E.

WHOLESALE; town or country; 4 years' wholesale and retail experience. C. T., 29 Queen Margaret's Grove, Mildmay Park, London.

LOCUM-TENENS; disengaged 18th; experienced; references thoroughly satisfactory. Ch. W. Wiggin, 21 Malvern Road, Kilburn, N.W.

AS Junior, in good-class Business; London preferred; aged 19; Prelim.; height 5 ft. 8 in.; 3 years' best experience. Carter, 108 The Grove, Stratford.

ASSISTANT; in Manchester or neighbourhood preferred; aged 23; good reference. "Alpha," 32 Rochester Street, Queen's Park, Manchester.

BRANCH Manager or otherwise; good experience and references; successful as Branch Manager; qualified. W. G. Langhelt, Addington Street, Ramsgate.

WHOLESALE Drug, Sundries, or in Stores; situation wanted in London; good salesman and dispenser; 35. H. D. Jennings, North End, Croydon.

AS Assistant; used to Dispensing, Prescribing, and General Retail; aged 22; tall; 7 years' experience; town preferred. "Chemist," 6 Bayley Street, Bedford Square.

MANAGER or Senior; Major; married; aged 27; fluent French; West End and Paris experience; good references. Timm, Messrs. Heppell & Co., 35 Haymarket, S.W.

LOCUM-TENENS; experienced; abstainer; good references; duty conscientiously discharged. "Veritas," Mr. Titmas, Chemist, Rosamond Street West, Manchester.

AS Confidential Assistant or Manager of Branch; had good experience in Dispensing and Retail Business; can be well recommended. "Delta," 389 High Street, Cheltenham.

AS Assistant, or Branch; 15 years' experience in good class country Retail; excellent references for character, &c.; married. "Sanitas," 121 London Road, Kirkley, Lowestoft.

DISPENSER and Bookkeeper to a Surgeon or Firm, in England or abroad; 9 years with present employer (surgeon); good references. Apply, stating salary, to G. B. D., 27 High Street, Croydon.

MANAGER, for small mixed retail; middle-aged; not married; abstainer; or assist in retail, wholesale, or sundries; good references, &c. Apply, A. B., 8 Park View, Manor Road, Liscard.

MANAGER or Senior; good Prescriber; thoroughly competent and reliable; accurate dispenser; London and provincial experience; qualified by exam. J. M., 2 Pixholm Grove, Dorking, Surrey.

LABORATORY Manager or Assistant; 5 years' exceptional experience in first-class laboratory; thorough analyst. "Pharm. Chem.," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ÆTAT 40; qualified; thoroughly experienced all round; tact in management; as counterman: in laboratory; tooth extractor, &c.; undeniable references. Walker, 20 Alice Street, Leicester.

WITH view to Succession.—Experienced Pharmacist of gentlemanly appearance and good address wishes to undertake Management of a Pharmacy; excellent credentials; aged 35; married. A. L. S., Bodington's Library, Forest Hill, S.E.

SON of Chemist (over 30) desires employment with country doctor; mixed drug business not objected to; many years with his father; can drive trap and rake himself generally useful; small salary, if indoors, accepted. W., Beacon Pharmacy, Exmouth.

TO Manufacturers and Wholesale Houses.—Experienced Traveller, calling on Wholesale and Retail Chemists, Druggists, &c., in Manchester, for established house, can accept good commission. Particulars and terms (in confidence) to "Traveller," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

100 SHARES Lamplough (Limited).—Offers wanted for. 50/50, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TO BOTTLE MAKERS.—Messrs. Brearley & Bascoul, chemists, Cannes, France, are open to receive quotations for 100 gross best dispensing bottles, assorted sizes, and 25 gross blue poison bottles, to be shipped about October next.

A GENTLEMAN, calling upon the leading physicians and surgeons in the United Kingdom for an old-established firm of high repute, is open to represent manufacturers of Surgical Instruments and Appliances, or Specialities (which would not clash with his present employers). Address in first instance, "Beta," care of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TO Manufacturers and others.—A Gentleman going to the Argentine Republic, Cape, India, Sumatra, China, Japan, Australia, New Zealand, Fiji, Canada, &c., is prepared to carry samples of a limited number of lines; terms, commission and proportion of expenses; advertiser will give full particulars personally or by letter. Address, F. W. H., care of Messrs. Leathwait & Simmons, 1 Pope's Head Alley, E.C.

MECHANICAL DENTISTRY.

FIRST-CLASS work done for the profession; specimens for show-cases in Vulcanite and Plate at reduced rates. Send for price-list to F. J. Phillips, 62 Dorset Street, Hulme, Manchester.

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BEST liniment yet introduced for neuralgia, toothache, pleurisy, rheumatics, sprains, bruises, and general injuries to the body. Supplied to the trade by the Line Romanelicum Company, Newport Pagnell, Bucks. Trade-mark registered.

CHEMISTS, CORONERS, AND THE SALE OF CHLORAL.

Vide CHEMIST AND DRUGGIST, March 30, page 419.—Chemists would do well to relieve themselves of all moral and legal responsibility by supplying Hunter's Solution of Chloral when asked for Sleeping Draughts, &c.

ROUSE, WIGMORE STREET, LONDON, W.

PRELIMINARY AND MINOR.

ALL Students who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. 32 Pupils passed the last Examinations.

STUDENTS' AIDS TO EXAMINATION.

PRELIMINARY.—Arithmetic and Metric System, 1s. How to Write an Essay, 3d. Caesar Simplified, 1s. Knotty Points in Latin Grammar, 1s. 6d. **MINOR.**—Equations Simplified, 1s. Illegible Autographic Prescriptions, 1s. Notes on Dispensing, 1s. Prescriptions given at the Minor, 6d. "Chemist," care of Mr. J. Edwards, Wye, Kent.

GEORGE STIRLING'S

ORGANIC MATERIA MEDICA.

A concise tabulated guide, enabling the student to master in a few hours the organic substances of the B.P. A Gentleman writes:—"Your handbook of Materia Medica is admirable, and a real boon to students." In cloth, gilt lettered, post free, 1s. 7d.

Sold by H. KIMPTON, 82 High Holborn, W.C.

All orders by post should be addressed to

JOHN GOWER, Publisher, 4 Lancing Road, Ealing, London.

CAUTION!

WARNER'S "SAFE" CURE.

In the High Court of Justice, Chancery Division.

H. H. WARNER & COMPANY v. J. WARNER.

NOTICE IS HEREBY GIVEN that on the 1st day of March, 1889, Mr. Justice Stirling ordered that the Defendant, his servants, and agents, be restrained until Judgment in this action, or until further order, from selling, or advertising, or offering for sale, any medical preparation not of the Plaintiffs' manufacture, so as to lead to the belief that the said preparations are the goods of the Plaintiffs.

The Defendant having appealed from this decision, the Lords Justices of Appeal on the 20th day of March, 1889, confirmed the order of Mr. Justice Stirling, and dismissed the Appeal with costs.

Dated this 26th day of March, 1889.

ERNEST SALAMAN, 65 and 66 Chancery Lane.

Acting as Solicitor for the Trade Marks Protection Society.

The attention of Chemists, Medicine Vendors, and the Public generally is called to the above decision and judgment. All similar attempts at imitation and infringement of our rights will be summarily prosecuted.

H. H. WARNER & CO.,

86 CLERKENWELL ROAD, E.C.

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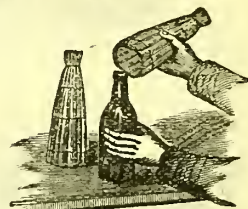
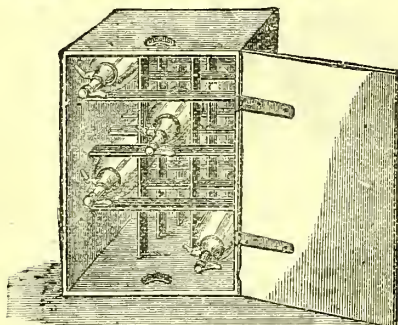
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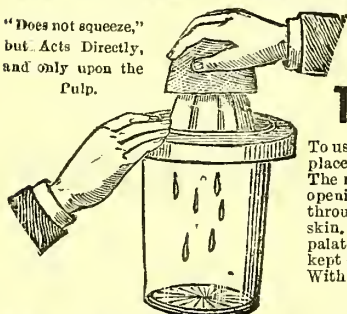
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EXPORT ORDERS RECEIVE SPECIAL ATTENTION.

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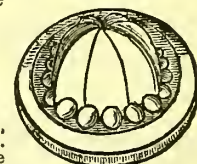
"Does not squeeze,"
but Acts Directly,
and only upon the
Pulp.



This Lemon Squeezer is to the old-fashioned article what the
Railway Carriage is to the Stage Coach.

THE "MODERN" LEMON SQUEEZER.

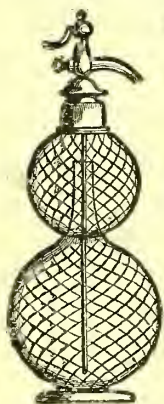
To use it, set the squeezer upon a tumbler, as shown by the accompanying illustration, place a half lemon upon the points, press downward, and rotate the lemon slightly. The ribs easily enter the pulp, the juice as it is liberated passes down through the openings into the tumbler; these openings are too small to allow the seeds to pass through. By this process the clear juice from the PULP is obtained free from admixture with the bitter oil of the skin. The juice thus procured is doubtless a most wholesome beverage, and is certainly very agreeable to the palate. Once tried this squeezer will supplant all old-fashioned appliances. Being made of glass, it is as easily kept clean as a tumbler. This squeezer can be used by a child, without soiling the hands, it is so easily managed. With this new appliance none of the juice is lost, therefore its superiority to old types of squeezers will be obvious.



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Telegraphic Address—"FEEDING BOTTLES LONDON"

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1772.**HENRY'S CALCINED MAGNESIA,**

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Messrs. THOMAS & WILLIAM HENRY, 11 East Street, St. Peter's, Manchester,

and is sold in bottles, authenticated by a Government Stamp bearing their Names. Trade Mark, "Henry's Calcined Magnesia."

Price 4s. 6d., or 2s. 9d.**NEW YORK—MESSRS. W. H. SCHIEFFELIN & Co., William Street. PARIS—MESSRS. ROBERTS & Co., 5 Rue de la Paix**

SPECIAL TO CHEMISTS.

ALL those Chemists of Great Britain and the Colonies who have stocked "VINOLIA" preparations will find it to their advantage if they will kindly notify us of the fact by post-card at once.

NOTE.—"VINOLIA" is the only agent which will relieve Pruritus every time as soon as applied. It is unequalled for irritable conditions of the skin; it cures a large proportion of cases of Eczema; it is innocuous and safe, and the best application for an infant's skin, or for Sunburns, Chaps, Chilblains, and Insect Bites. It is miscible with Mercury, Naphthol, Resorcin, Chrysarobin, Sulphur, etc., etc.

"VINOLIA" SOAP (Superfatted) contains an excess of easily saponifiable fat, instead of free alkali to dry, irritate, and shrivel the skin. It is the greatest discovery in the way of soaps ever made, and has received the sanction and favour of all the great skin specialists and chemists. Those who value the health of the skin and hair, and especially all who have weak skin, or any skin affections, should use "VINOLIA" SOAP (Superfatted).

For our Special offer to Chemists please see last week's "CHEMIST AND DRUGGIST."

Prices:—"VINOLIA" (for Eczema, Pruritus, etc.), 1s. 9d. and 6s. per box.
"VINOLIA" SOAP (Medical), 2s. per box of 3 Tablets; "VINOLIA" SOAP (Toilet), 2s. 6d. per box of 3 Tablets.


BLONDEAU & CIE.

Agents—

ROBERTS & CO., 76 New Bond Street, LONDON,

And 5 RUE DE LA PAIX, PARIS.

EASTER HOLIDAYS—IMPORTANT NOTICE.

 Correspondents will please note that for next week's issue of "The Chemist and Druggist" Advertisements for insertion in the Exchange Column must reach our Office not later than noon on Wednesday, April 17th, 1889.

EXCHANGE COLUMN.

This section of "The Chemist and Druggist" must be closed for press by Wednesday noon, next week. Remittances payable to EDWARD HALSE.

FOR DISPOSAL.

Drugs and Chemicals.

Bland's pills, Richardson's, 10 gross tins, post free, 6s. 6d. Wylie, Chemist, College Street, Edinburgh.

What offers?—10l. worth (wholesale price) "Star" veterinary medicine; any preparation or list sent. Knott, Ashbrook Road, Upper Holloway, N.

3 lbs. Hotchkiss oil mint, 13s. 1b.; 3 lbs. bismuth, subnit, 6s. 6d. 1b.; 24 oz. quinine, 1s. 4d. oz.; 2 lbs. pulv. ipecac. 6s. 1b.; 4 lbs. gum benzoin, 1s. 3d. 1b.; 4 lbs. opium (good), 3s. 6d. 1b. Hayton, Lingdale-in-Cleveland.

Educational.

Scuthall's cabinet of materia medica specimens, as new, price 10s. 6d. Halford, Chemist, New John Street, Birmingham.

On sale, Wills' "Preliminary Lectures, with Notes," 7s. 6d. Greenhalgh, Agecroft House, Pendlebury, near Manchester.

Copland's "Medical Dictionary," published at 36s., price 15s.; Clater's "Cattle Doctor," Armatage's "Horse Doctor," published at 21s., price 10s. 6d. each, nearly new. Gralidge, Chemist, Andover.

Atfield's "Chemistry," 10s.; Bentley's "Botany," 10s.; Wills' "Materia Medica," with plates 7s.; "Pharmacy," 4s.; "Practical Botany," with plates, 3s.; Wootton's "Problems," 2s. 6d.; Ince's "Grammar," 2s. 6d.; all late editions, equal to new. Vincent, 90 Islington Road, Brighton.

Formulæ.

Reliable recipes, 6d. each; full set of 130 neatly copied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wye, Kent.

Money made easily!—Send 1s. 6d. for any 3 recipes, all guaranteed in use and very profitable; "Corn Cure," best in market; "Embrocatio alb." like Ellman's; "Medicated Water," resembles Woodward's; "Glycerine Cream," enormous sale; "Hop Tonic," costs 1s. 1b.; "Herbalade," superior to Mason's; "Digestive Syrup," facsimile of Siegel's; full directions; detailed lists free. Notice changed address: Brooks, Chemist, Hornsey, N.

Literature.

What cash offers for *Pharmaceutical Journal*, 1889, posted Saturday evening? Hartell, Chemist, Coseley, Bilston.

Pharmaceutical Journal 19 vols. 8 vols. bound, from 1867-3 to May 1, 1885, one number short, the lot 30s. Neill, Regent Road, Morecambe.

Shop Fittings

Pent glass 6-ft. counter case, 5l.; upright ditto, 3 doors, 70s. Henry Brett, Fakenham, Norfolk.

Drawers.—Several nests very cheap; also dispensing screen, desks, &c. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

Fittings, utensils, and part stock of chemist's shop for sale at a very low price to clear. 336 Old Street, Shoreditch, London.

400 shop bottles, 11l.; 3 specie jars and 1 show bottle, 50s.; pestles, mortars, and set of chemist's utensils, 80s. Call and see these wonderful bargains at Brett's, Fakenham, Norfolk.

No reasonable offer declined. Drugs, fittings, bottles, 3 show-jars, drawers (mahogany fronted), &c., suitable for chemist commencing in small way. French, 13 Camberwell Green.

Some chemist's fittings to be sold, cheap; viz., nested drawers, counter-lamp, desk, carboys, &c., at present stored near London. Full particulars of W.B., 11 Cross Street, Ryde, Isle of Wight.

Bent plate-glass counter-case, 7 ft 6 in. long 21 in. wide, very good, second-hand, price 7l. 10s.; also one 5 ft. long, as Maw's A13, price 5l. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

Ointment jars (joh line), blue canopy top, 4-oz. 4s., 8-oz. 6s., 1-lb. 8s., 2-lb. 16s. per doz.; English shop rounds, all sizes, 3s. 6d. to 9s. doz.; counters from 5s. per foot, lineal measure; drawers; mirrors, all sizes; counter, wall, tooth-brush, dispensing, and other show-cases; carboys, specie jars, and a variety of other shop fittings ready for use; half usual prices. Natali & Co., 181 Aldersgate Street (nearly opposite Maw's).

Second-hand.—17 1-gallon and 4 3-quart green carboys, with stoppers, large japanned caps, gold labels, 1l. 10s.; 1-gallon black upright store bottles, caps, bungs, and gold-labelled, 14s. per dozen; 19 1-gallon ditto, no labels, 10s.; 1 31-in. specie jar, ornamental glass cover, ornamental scroll label, 1l. 15s.; 2 specie jars, coat of arms, gilt tin covers, 23 in., 2l. 15s.; 2 23 in., Royal arms, japanned covers and mahogany pilnths, 4l. 10s.; 1 30-in., Royal arms, glass gilt covers, 2l. 17s. 6d.; 1 30 in., pheuix, 2l. 5s.; wall-glass case, 8 ft. 10 in. by 6 ft., mahogany glazed sashes, shelving, cedar grained closets under, mahogany top, 5l. 15s.; 140 ft. run deal painted shelving, black polished edges, 1l. 10s.; 6 ft. 9 in. by 4 ft. 3 in. Spanish mahogany glass case, elliptical on plan, cornice, skirting, shelving, sashes with bent plate glass, 12l. 10s. W. Hawke & Son, Wild Court, Great Wild Street, London, W.C.

Miscellaneous.

Wax.—Fine imitation beeswax for sale, 8d. 1b. Ayton, 293 Old Street, London.

Poppy-heads, 5s. per 1,000, bag 6d., sample 3d.; crushed 10s. cwt. Connor, Doncaster.

Clinicals, Gariel's pessaries, and other medical instruments; old patents, &c., cheap; stamp for list. Wilson, Harrogate.

For sale, or exchange anything useful, 2 gross 6d. medicine stamps, also 1 gross 3d. ditto; offers. "Chemist," 34 High Street, Putney.

Fretwork-machine, with blow, circular saw, drill, lathe, 23s., cost 35s.; exchange for chemical apparatus or books. Patrickson, 26 Burton Terrace, Dewsbury Road, Leeds.

Earthenware unions for feeding bottles, from 1 to 6 gross, 1s. 4d. gross, free; for whole-sale trade, 1s. gross, 10 % in quantities. H. Greatbatch, 16 Newcastle Road, Hauley.

Bicycle, 53-inch, Humber pattern, steady roadster, in good condition, to exchange for microscope or pharmaceutical literature to value of 5l. Mackenzie, Castle Gordon, Musselburgh.

Safety-bicycle, Coventry Machinists' Company's No. 1 Swift, 1887 pattern, with ball pedals, has been ridden about 2,500 miles, in good repair; lowest cash price, 6l. 6s. Thomas Jobson, 20 Shepherd's Bush Road, London.

Air bed and pillow, with bellows complete, 72 in. by 36 in., as Fig. 14 (Maw's), in perfect condition; also mahogany cigar case, 32 in. long, 12 in. wide, 8 in. high, glass tablet, lettered gold on white, "Choice Havannah cigars," similar to fig. A35. Boyden, Chemist, Pocklington.

Microscopic objects, 5s. dozen, including thousands of gorgeous polarising, brilliant opaque, &c., all mounted on 3 by 1 glass slips; 4 dozen sent, carefully packed, postage paid, for 21s. to Belgium, France, Germany, Switzerland, Australia, Canada, India, Cape, New Zealand, and all British Colonies; Natural History books wanted in exchange. Henry Ebbage, 344 Caleonian Road, London.

Declining business.—On sale, cheap, 3 ft. grinding pan, with steel scrapers, new, cost 36l., will take 18l.; also a large quantity of turned wood pillboxes, 1 1/2 in. diam. by 1/2 in. deep outside, cases of 53 gross 9d. per gross, small lots 1s. per gross; and 2 in. diam. by 1 1/2 in. deep, 3s. per gross; small piping-press, &c., &c. Parkinson, 39 Dover Street, Manchester. Wonderful bargains; must be sold.

WANTED.

2-grain pill-machine, immediately; cheap. 254/20.

Composition mortars, No. 6 and No. 10. Green, Chemist, Christchurch.

Tincture press, about 3 gallons. Send cash price to W. White, Towcester.

Copy of *Chemist and Druggist* for September 25, 1886. Lloyd, Chemist, Abergyle.

Saleable patents and proprietary articles, good condition; send list and lowest price. 2c/9.

Mahogany desk and case, also 6 ft. counter case, A18 Maw's list. C. W. S., 27 Dorchester Place, Marylebone Road, N.W.

Mondolott's S.W. machine, No. 1, must be in good condition; a pessary mould; 10-gallon tin, with tap. J. W. Cocks, Pharmacist, Torquay.

Latest editions Remington's "Practice of Pharmacy," Stillé and Maisch's "National Dispensatory," Cooley's "Cyclopædia of Receipts," "Art of Pharmacy." Acock, Chemist, Bath.

Address Wanted.

Mr. Winifred Morgan, Chemist's Assistant late of Shrewsbury, son of Mr. Morgan, Outfitter, 83 North Street, Leeds. 253/25.

JOHNSON & JOHNSON

NEW YORK and LONDON,

MANUFACTURING CHEMISTS,

MANUFACTURERS OF ALL VARIETIES OF

MEDICINAL AND SURGICAL PLASTERS IN RUBBER COMBINATION

(PERFORATED AND PLAIN), AND ISINGLASS AND MUSTARD PLASTERS.

ALSO MOIST ANTISEPTIC DRESSINGS & ABSORBENTS.

IMPROVED BELLADONA PLASTER.

Increased action by the addition of Boracic Acid and a mild rubefacient, by which the activity of the cutaneous glands is stimulated, and their power of absorption increased.

We have succeeded in greatly increasing the therapeutic value of Belladonna and other Plasters.

FIRST.—By preparing the mass in a manner calculated to promote a more rapid absorption of the incorporated drug.

SECOND.—By employing (in Belladonna Plaster) a more reliable extract of the drug than is commonly used.

The attention of manufacturers of Medicated Plasters has hitherto been directed chiefly toward perfecting the mechanical excellence of their preparations, overlooking, to a certain extent, the real end and aim for which Plasters are made.

The extent to which counter irritants, solvents, detergents, &c. can be utilised in Plasters to produce a mechanico chemical alteration of the epidermis, thus rendering the skin more absorptive, has been largely if not entirely overlooked.

By the addition of Boracic Acid and a mild rubefacient to the regular Belladonna Plaster formula, several important advantages are secured. The fatty matter in the pores is dissolved by the deter-sive action of the former, and the glands are expanded and stimulated by the counter-irritative action of the latter, by which means not only is a larger proportion of the medicinal element of the Plaster absorbed, but the therapeutic effect is both increased and more rapidly obtained.



ANTISEPTIC TABLETS.

The increasing demand for antiseptic agents in a convenient form has induced us to prepare Corrosive Sublimate Tablets after the following formula:

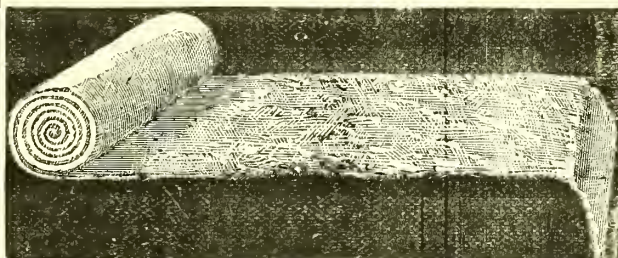
Corrosive Sublimate, gr. 7, 3.

Ammonium Chlor., gr. 7, 7.

The ammonium chloride is used to make the solution permanent so that the corrosive sublimate will not be precipitated by the organic matter usually contained in water. Each Tablet contains the requisite amount of corrosive sublimate to make a solution of 1-1,000 when added to a pint of water.

ABSORBENT COTTON IN EVEN SHEETS

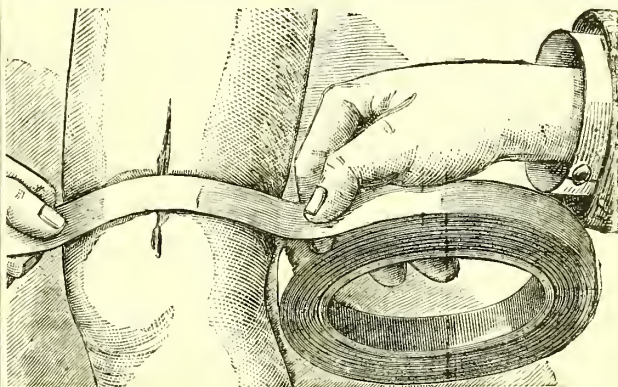
Rolled with Tissue Paper between them to prevent felting.



Cotton in this form is as easily applicable as an ordinary cloth bandage. Its advantages can be seen at a glance.

Supplied in all sized Packets from 1 oz. to 1 pound.

RUBBER ADHESIVE PLASTER on HOLLOW CYLINDERS.



Pronounced by Surgeons to be the most convenient form ever devised for adhesive plaster. Besides its convenience it is much cheaper than rubber adhesive plaster on spools. It is put up in width varying from 1/2 an inch to 3 inches, 5 yards long, in neatly decorated tin boxes.

Our goods are supplied by all the leading Wholesale Houses in Great Britain and Ireland, also by our
SOLE WHOLESALE AGENTS, H. C. MASON & CO., 1 & 2 AUSTRALIAN AVENUE, LONDON, E.C.
who will be glad to forward Lists and terms on application.

(When ordering through the Wholesale Houses care should be taken to specify the goods of JOHNSON & JOHNSON'S Manufacture.)

The Chemist's Aerated & Mineral Waters Association, Limited London :: Harrogate :: Bristol ::

THE CHEMIST'S TRUE FRIEND.

Established in 1878 to supply Chemists ONLY with the Highest Quality of
Aerated Waters at the Lowest Co-operative Prices.

Received with doubt, it worked its way uphill to success, and now fills more
Syphons than any Maker in the United Kingdom.

NUMBER OF MEMBERS, about 2,000.

SECURE A SHARE WITHOUT DELAY.

Write—Secretary, 45 Gifford St., Caledonian Road, London, N., for Samples, Prices, &c.

A WONDERFUL SUCCESS!!

NON-INTOXICATING BEER

Made from MASON'S Original

EXTRACT of HERBS

(REGISTERED.)

Composed of Yarrow, Dandelion, Comfrey, & Horehound.

ENLARGEMENT OF SIZE.

A Sixpenny Bottle makes EIGHT GALLONS of

HERB OR BOTANIC BEER

A NON-INTOXICATING BEVERAGE

Full of Body and Flavour, with a Creamy Head like Bottled Ale, the most
perfect substitute for Alcoholic Drinks ever discovered, for either
Summer or Winter.

BEWARE of mean and fraudulent imitations.

BEWARE of others copying our title.

MASON'S is the original and only genuine.

MASON'S is a Special Compound entirely from Herbs.

NO OTHER EXTRACT MAKES BEER LIKE IT.

Sold in Bottles at 6d., 1/, & 2/ each, with directions.

MASON'S WINE ESSENCES

Make Temperance Wines in a few minutes.

Ginger, Orange, Lemon, Raspberry, Black Currant, &c.

These are having a very large sale now, and are extensively advertised.

Sold in Bottles at 6d., 1s., and 2s. each.

Quotations on application.

SOLE INVENTORS &
MANUFACTURERS: **NEWBALL & MASON,**
Manufacturing Chemists and Botanic Druggists, **NOTTINGHAM.**

KINMOND'S

Royal Leamington

APNEUMATIC

TABLE WATERS

Were first supplied to H.M. the Queen in 1856,
and to H.R.H. the Prince of Wales in 1862.

KINMOND'S GINGER ALE,

AND ALL THEIR OTHER WATERS,
Are UNRIVALLED for PURITY and QUALITY.

In Ordinary Bottles and Syphons.

MANUFACTORY- LEAMINGTON.

Send for Trade List and Compare Prices.

MERCHANTS, SHIPPERS & AGENTS

INDENTORS SHOULD SPECIFY OUR
MANUFACTURE.

Soluble & Fruit Essences,
ESSENTIAL OILS, COLOURS,
 And all requisites for the **AERATED WATER TRADE**
DUCKWORTH & CO.
 AND 102, FENCHURCH ST. Manufacturing Chemists
 LONDON. Corporation St. **MANCHESTER.** *ENG.*

INDENTORS SHOULD SPECIFY OUR
MANUFACTURE.

Our Preparations are **SPECIALLY** Manufactured to meet
the Requirements of the **EXPORT TRADE.**

“PREMIER BRAND”
ESSENTIAL OILS.

Concentrated Fruit Essences—Soluble

MANUFACTURED BY

JOHN CUMMOCK

*Who has received Hundreds of Unsolicited Testimonials, also THREE GOLD MEDALS,
besides other Honours.*

Chemists manufacturing their own Aërated Drinks should write for Prices and Samples of the following:—

ESSENCE “SPARKLING LIMETTA”—Soluble “Essence of Lemon”

ESSENCE “LEMON SQUASH”—Essence for Sherbet

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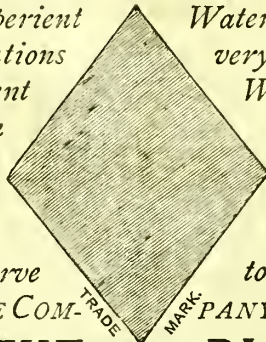
AND COMPARE WITH OTHER MAKERS.

Manufactory & Offices: **45 ROPE WORK LANE, GLASGOW.**
 LATE 32 MAIN STREET.

THE BEST NATURAL APERIENT.

The APOLLINARIS COMPANY, LIMITED, London, beg to announce that, as numerous Hungarian Aperient Marks, Names, and Designations used for the Hungarian Aperient them, they have now adopted an comprising their Registered which

Waters are offered to the public with very similar to those which are Water so long imported by additional Label of their own Trade Mark of selection, consists of



A RED

This Label will henceforth also serve APERIENT WATERS SOLD BY THE COM-

DIAMOND. to distinguish the HUNGARIAN PANY from all other Aperient Waters.

DEMAND THE

DIAMOND MARK,

and insist upon receiving the HUNGARIAN APERIENT WATER of the APOLLINARIS COMPANY, LIMITED, London.

Of all Druggists and Mineral Water Dealers.

FAVARGER'S SYPHONS

ARE THE

BEST IN THE MARKET.

HEADS PURE TIN,

AND

GUARANTEED FREE FROM LEAD.

GLASS,

FINEST ANNEALED.

SYPHONS.

READ

the following:—

"Edinburgh

"We beg to say that we have used your

"Syphons for many years, and are very well pleased with them. We have tried other makers

"but always found yours superior. We think your

"Syphons the best of any we have seen.

"We are, yours truly, H. C. BAILDON & SON."

"Bournemouth.

"We cannot, we think, do better than tell you that of the Syphon

"supplied us by you, and used by us during three successive seasons, we have no

"had one out of order—if we except two with broken tubes; and only one burst,

"and that on first time of filling. The Plating is, we consider, of special excellence

"and wears well. We shall not need to look farther whilst you continue to supply us with what

"we consider the best value in the market.—Yours truly, J. M. DOWDEN & CO."

PRICES, FULL PARTICULARS, AND TESTIMONIALS, APPLY TO

FAVARGER & CO., 76 TURNMILL STREET, E.C., LONDON

DAHL'S DYSPEPSIA CAKES,

For Indigestion and Constipation, 1s. and 2s. 6d. per box.

DAHL'S POWDERED CAKES,

For Specially Delicate Cases, 2s. 6d. per box

THE CHILDREN'S BREAD,

Specially for Children, 2s. per box.

DAHL'S AGENCY—41 EASTCHEAP. E.C.

"CYMRY AM BYTH."

"ABSOLUTELY PURE."



REGISTERED.

ELLIS'S RUTHIN WATERS.

ASK FOR ELLIS'S.

CAUTION.—Corks branded "R. ELLIS & SON, RUTHIN." Every Label is Registered, and bears Name and Trade Mark (Goat on Shield).

SOLE ADDRESS—R. ELLIS & SON, RUTHIN, NORTH WALES.

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BY SPECIAL
H.R.H. THE DUKE OF
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APPOINTMENT TO
CONNAUGHT AND THE
FAMILY.

BOURNE WATERS.

THE PUREST IN ENGLAND.

R. M. MILLS & CO., BOURNE, LINCOLNSHIRE,

MANUFACTURERS OF

SODA, POTASH, LITHIA, AND SELTZER WATERS,
LEMONADE, AND AROMATIC GINGER ALE.

4-dozen and 6-dozen Cases Carriage Paid.

Special attention is invited to our manufacture of

LITHIA WATER.

Each Bottle contains an average dose of Carbonate of Lithia—the recognised Specific for Gout.

THE LATEST SPECIALITY—the Celebrated Artesian Bourne Water in Pints and Quarts for Table Use.

Prices and Pamphlet on application.

Agents appointed.

Messrs. INGRAM & ROYLE, 52 Farringdon Street, Wholesale Agents for the sale of our Waters.

Telephone No. 7,522.

Telegraphic Address—"IDRIS, KENTISH TOWN."

IDRIS & CO.

OLYMPIA TABLE WATER,

A CARBONATED DISTILLED WATER.

"The OLYMPIA WATER is a singularly pure, wholesome, and pleasant Table Water for everybody's daily use. For Gouty or Rheumatic persons it is the best possible drink."

JAMES EDMUNDS, M.D., M.R.C.P. Lond., &c.,

Medical Officer of Health and Public Analyst to St. James's, London.

FRUIT CORDIALS

In Reputed Quarts, elegantly Capsuled and Labelled.

PURE LIME JUICE

("Idris" Brand).

This Juice is the first clear pressings of selected fruit in specially designed wooden presses prepared according to our instructions at the Wall House Estate, Dominica, B.W.I., and will be found of a delicious fruity flavour, without the slightest mustiness or bitterness, and fully 25 per cent. stronger in Citric Acid than the usual brands of Lime Juice.

Samples and quotations for quantities and regular supplies sent free.

KARN! THE BEST BEEF BEVERAGE.

A Concentrated form of Fluid Beef.

"A single teaspoonful, or more, in a cup of boiling water, makes one of the pleasantest drinks I have ever tasted."

"DR. A. J. H. CRESPI."

 $\frac{1}{4}$ -lb. Bottles 12/ per Dozen. $\frac{1}{2}$ -lb. Bottles 22/ per Dozen.

PATENT NON-CORROSIVE WIRE-COVERED SELTZOGENES.

Prices, including Two Funnels and a Stopper for charging.

NON-CORROSIVE WIRE. CANE COVERED.

3-pt.	...	...	...	...	12/
5-pt.	...	...	...	...	18/
8-pt.	...	...	...	...	30/

13/
19/
31/6

}	Discount 20 per cent.
	and 2½ per cent.
	for cash.

SELTZOGENE POWDERS.

3-pt. size	...	...	...	...	...	18/6 per Dozen Boxes, Nett
5-pt. "	...	...	...	...	...	23/9 " "
8-pt. "	...	...	...	...	...	39/6 " "

}	Each box containing 12 charges of
	Best English Tartaric Acid and
	Bicarbonate of Soda.

SELTZER SALTS, 4/ per lb. Nett.

Every description of Seltzogenes repaired in an efficient manner and at Low Prices.

We also undertake to re-wire rusty Seltzogenes with our non-corrosive wire at the following prices, viz. :—

3-pt. 3/

5-pt. 4/ each, Nett.

IDRIS & COMPANY,

KENTISH TOWN, LONDON, N.W.

JEWSBURY & BROWN'S (MANCHESTER) SPARKLING TABLE WATERS, UNRIVALLED FOR PURITY AND QUALITY.

SODA WATER.
SELTZER WATER.
POTASH WATER.
LITHIA WATER.
SIMPLE
AERATED WATER.



LEMONADE.
GINGER ALE.
QUININE TONIC.
GINGER BEER.
HOREHOUND BEER

EXTRACTS FROM ANALYTICAL REPORTS.

"The examination of the Waters which I have made has satisfied me that they have been prepared with the greatest care, and are of excellent quality."

FRANÇOIS JONES, F.R.S.E., F.C.S.

"On the whole, I have no hesitation in stating that your Aerated Waters are of the highest standard of purity which is practically attainable."

LOUIS SIBBOLD, F.I.C., F.C.S.

J. & B.'s Syphons are mounted with PURE BLOCK TIN, thus ensuring absolute immunity from dangerous metallic contamination.

"The Lemonade is, for flavour and general excellence, superior to any similar compound which I have examined, and contains no acid but Citric Acid."

"I took a sample of the water used in your manufactory, in the preparation of the Aerated Waters, and found it, as was the case with the completed compounds, entirely free from lead, copper, or any injurious matter whatever."

C. ESTOUBERT, F.C.S., F.C.I.

CARRIAGE PAID AND ON RETURNS.

113 MARKET STREET, and 44 DOWNING STREET, MANCHESTER.

A GOOD LINE FOR CHEMISTS.

The Proprietor will forward, carriage paid, on receipt of Postal Order, 4s, 1 dozen Ed. bottles of this Popular preparation for making

HERB BEER,

together with One Thousand Pictorial Handbills printed in colours on fine tinted paper, being a series of 16 copper-plate



views of scenes from the famous "Dukerie," of North Notts. These Handbills are a high-class example of the printer's art, and are retained by the public for the beauty of the pictures, and thus cause a demand for the preparation wherever introduced. This exceptionally favourable offer can only hold good until 31 May, 1889.

The Proprietor is induced to make this offer that the preparation may become more widely known in parts where it has not yet been introduced, his experience showing that where once known and used a large demand has been created and maintained. Chemists who are alive to the requirements of the times will see that it is greatly to their advantage to keep this well-known Extract, rather than be at the trouble and expense of putting up a preparation themselves. Customers' names printed on the handbills. Specially favourable terms for larger quantities may be obtained from the Proprietor,

MANSFIELD, NOTTS.



TO AERATED WATER MANUFACTURERS

HAY'S SOLUBLE ESSENCES

ARE GUARANTEED TO BE THE FINEST IN THE MARKET

Honourable Mention: International Food Exhibition, Agricultural Hall, London, Oct., 1880. Gold Medal: Soc. of Arts, Paris, 1883.

HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER,

A Pure Essence of the Finest Ginger.

Trade Price 5/- per lb.; 12 lbs. and upwards, 4/6.

HAY'S FORTIFIED ESSENCE OF JAMAICA GINGER,

For First Quality Ginger Ale.

Trade Price 5/6 per lb.; 12 lbs. and upwards, 5/-.

HAY'S GINGER ALE EXTRACT.

For Second Quality Ginger Ale.

Imparts Pungency, Colouring, great Brilliancy, and an

unusually Fine Ginger Flavour and Aroma.

Trade Price 4/6 per lb.; 12 lbs. and upwards 4/-.

HAY'S GINGER ALE ESSENCE,

For Third Quality Ginger Ale.

This Essence makes a beverage that is unsurpassed by

the so-called finest Belfast Ginger Ale.

Trade Price 9/- per lb.; 12 lbs. and upwards, 8/6.

THESE ESSENCESHave obtained the Highest Testimonials from all the
Medical Journals, and from the Principal Trade Journals
in this and other countries.

TRADE MARK



REGISTERED

For ORANGE, VANILLA, and all other Essences,
SEND FOR PRICE LIST.**HAY'S HOP ALE ESSENCE,**For the manufacture of the Finest Aerated Hop Ale.
This Essence is made from the choicest Hops grown,
and is unrivalled for its peculiarly fine Hop Flavour
and Aroma. Hop Ale made from this Essence has
the full flavour of the finest Hops, and is a really
appetising Bitter Beer.

Trade Price 8/6 per lb.; 12 lbs. and upwards 8/-.

HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS,

No. 1. Highly Concentrated.

Trade Price 8/6 per lb.; 2 lbs. and upwards 8/-.

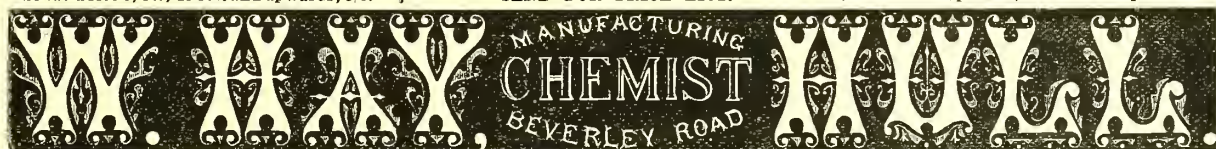
HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS;

No. 2. Makes an exquisitely fine Lemonade.

Trade Price 6/6 per lb.; 12 lbs. and upwards, 6/-.

HAY'S LEMON FLAVOUR.Imparts to Lemonade all the Fine Aroma and Flavour
of the choicest Lemons.

Trade Price 5/- per lb.; 12 lbs. and upwards 4/6.



NOTICE to the TRADE

KRONENQUELLE.

It having come under our notice that certain Mineral Water firms were importing KRONENQUELLE WATER, we beg to remind the Trade that we are the Sole Consignees for this Water, and also the Sole Proprietors of the Trade Mark Design No. 35279, "Trade Marks Journal," No. 309, February 27, 1884, and that any importation bearing this design through any other source is an infringement of our rights, and that any person doing so will be liable to prosecution.

26 Finsbury Pavement, E.C.

W. SCHACHT & CO.

Books and Glass Show Tablets on application.

EUGENE GERAUT & CO.**139 & 141 FARRINGDON ROAD, LONDON, E.C.****ALL SELTZOGENES AND SYPHONS,**

Previous to being delivered, are tested at a pressure of 240 lbs. per square inch, being double that which they are used at; by this we can guarantee every machine on its leaving our firm.

It must be distinctly understood that all Seltzogenes and Syphons bearing our name are of pure Tin, and made on the PREMISES OF THE ABOVE FIRM, consequently must not be confounded with other cheaper, and inferior foreign goods that may at any time be forced on the market. The ever-increasing demand for our goods convinces us that we are, as hitherto, the leading and largest firm in this class of trade.

Complete with Funnels, Stopper, and directions for using. For order of £5 and upwards Customers can have their Names stamped on Metals free of charge.

SELTZOGENES REPAIRED, REWIRED, & TESTED BY EXPERIENCED WORKMEN.

POWDERS FOR SELTZOGENES AND GAZOGENES.

Illustrated Price List on application.



ESS. LEMON

(NEW CROP)

Direct from the Manufacturers!!

FOR very many years past we have been able to offer to the Trade Essence of Lemon of exceptional quality, such as could not be obtained through other sources.

Two members of our firm, at various periods, have spent considerable time in the country of its production, in order to arrange for its being made especially for us. In fact, some twenty years ago, when we first introduced our "Speciality" quality, good Essence was unknown in the English Market. We have, however, never ceased studying the question of how we might still improve our position in this article, and have at last decided to **MANUFACTURE IT OURSELVES ON THE SPOT!** It is our pleasure therefore to be able to announce to our friends, and the Trade generally, that we have established works in Messina, Strada Antico Cemitero, for the manufacture of Essences Lemon, Orange, and Bergamot, and that we have already commenced operations; our Mr. A. W. BUSH is now in Messina superintending the manufacture.

We are now placed in the **unique position** of being able to offer the above Essences **absolutely pure**, and **guaranteed made from the finest** selected fruit only. We shall, of course, also continue to offer good commercial qualities as heretofore. We have received advices of first shipments, and any orders entrusted to our care can be forwarded immediately on arrival.

We take this opportunity of mentioning that Ess. Lemon made from the early fruit is superior to that made from the fruit gathered later in the season. We should therefore advise our friends to make contracts for forward delivery immediately, for in such cases we shall be able to hold the early Essence in stock for them.

In consequence of our Branch Establishment in Messina we shall be exceptionally well placed; and, although the market for new Essences is in no way easier, still, by reason of our position we have been enabled to make **AN IMPORTANT REDUCTION IN OUR PRICES.**

Our advices state that the market is very firm for all Essences, and a rise in prices probable, we should advise our friends to make contracts early. Should any of our clients desire it we can execute orders direct from our works in Sicily.

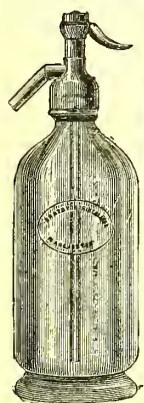
W. J. BUSH & CO.
ARTILLERY LANE, LONDON.

146 MINORIES LONDON E.C.
New York
Sydney
&c.

SODA WATER MACHINERY
AND ALL ACCESSORIES
FOR THE TRADE

BRATBY & HINCHLIFFE
HEAD OFFICE
SANDFORD ST. ANCOATS, MANCHESTER.

BOXES BOTTLES MACHINERY
ESSENCES
Catalogues Circulars Estimations
Post Free



SYPHONS & SELTZOGENES

GREAT REDUCTION IN PRICE.

We have recently been entrusted with a most important Agency for the above-named goods. Our Principals are the best known firm in Paris, and the Syphons are undoubtedly the cheapest and strongest in the market. The tops are made of pure English Tin, guaranteed free from lead. The Seltzogenes are made on the well-known "Fevre" system, and each one is thoroughly tested before being sent out.



WE CAN GIVE TO LARGE AND SMALL BUYERS EXCEPTIONALLY LOW PRICES.
PLEASE WRITE US AT ONCE FOR PRICES, STATING QUANTITY OF EACH KIND REQUIRED.

SODA-WATER MACHINERY.

MELBOURNE EXHIBITION, 1889, UNPRECEDENTED SUCCESS.

We have obtained at the above Exhibition

3 HIGHEST AWARDS POSSIBLE

A feat never accomplished before by any other house supplying requirements for the Aerated Water Trade.

These awards will carry with them **THREE GOLD MEDALS**, which were awarded as follows:—

- 1st—SODA-WATER MACHINERY (Highest Award possible).
- 1st—ESSENTIAL OILS & FRUIT ESSENCES (Highest Award possible).
- 1st—PATENT AND ORDINARY BOTTLES (Highest Award possible.)

WRITE FOR NEW ILLUSTRATED CATALOGUE, POST FREE.

BRATBY & HINCHLIFFE.

Aerated Water Engineers and Glass Bottle Manufacturers,

SANDFORD ST., ANCOATS, MANCHESTER,

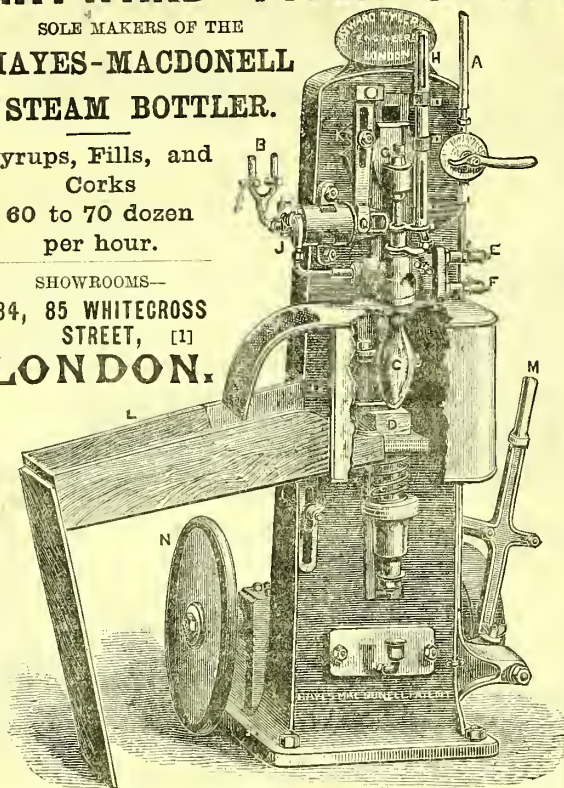
And at 146 MINORIES, LONDON, E.C.

HAYWARD TYLER & CO.

SOLE MAKERS OF THE
**HAYES-MACDONELL
STEAM BOTTLER.**

Syrups, Fills, and
Corks
60 to 70 dozen
per hour.

SHOWROOMS—
84, 85 WHITECROSS
STREET, [1]
LONDON.



CHEMISTS' TEA AGENCY.

WALKER & DALRYMPLE'S

BROKEN-LEAF TEA, 1s. 8d. per lb.
A MONEY SAVING TEA. ABSOLUTELY PURE.
The small leaf from some of the finest India and China Teas. Produces
a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas.
Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S

INTERMEDIATE TEA, 2s. per lb.
BEST at the PRICE EVER SOLD. Great strength and a most useful
Tea where there is a large consumption. Recommended to all who wish to
SAVE in their Tea. Agents appointed, where unrepresented, throughout
the United Kingdom.

WALKER & DALRYMPLE'S TEAS.—
AGENTS APPOINTED, where unrepresented, throughout the
United Kingdom.

Prospectus and Samples Free on Application.

Warehouses, 154, 155, 159 and 160 WHITECHAPEL ROAD, and
2, 4, 6, 8, 10, 11, and 12 BRADY STREET, LONDON.
P.O.O. payable at head office. Bankers, the National Provincial Bank of
England.

DISPENSING BOTTLES & PHIALS

The following are our greatly Reduced Prices:—

CLEAR BLUE TINTED.

3 and 4 oz.	6/6 per gross.	12 oz.	11/6 per gross
6 and 8 oz.	7/6 "	16 oz.	15/6 "

WHITE MOULDED PHIALS.

LONG OR SQUAT SERIES.

1/2 oz.	3/0 per gross.	1 1/2 oz.	4/3 per gross
1 oz.	3/6 "	2 oz.	4/9 "

Prompt attention to country orders. Packages 1/ each, allowed for if
returned. Sample bottle sent free on application.

I. ISAACS & CO.

GLASS BOTTLE MANUFACTURERS,

25 Francis St., Tottenham Court Road, London, W.C.

Established upwards of 70 years.

Bankers, London and Westminster.

EIGHT PRIZE MEDALS AWARDED

GOODALL'S HOUSEHOLD SPECIALITIES.

YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., and 2s. each

GOODALL'S BAKING POWDER.

The Best in the World. 1d. Packets; 6d., 1s., 2s. and 5s. Tins.

GOODALL'S EGG POWDER.

One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s.,
and 5s. Tins.

GOODALL'S CUSTARD POWDER.

Delicious Custards without Eggs. In Boxes, 2d., 6d., and 1s. each

GOODALL'S BLANCMANGE POWDER

Delicious Blancmange in a Few Minutes. Boxes, 6d. and
1s. each.

GOODALL'S QUININE WINE, B.P.

Best Tonic yet Introduced. Bottles, 6d., 1s. and 2s. each.

GOODALL'S GINGER-BEER POWDER.

Makes the Best Ginger-Beer. Packets, 3d. and 6d.

GOODALL'S BRUNSWICK BLACK.

For Painting Stoves, Grates, Iron, Tin, &c. 6d. and 1s. Bottles

GOODALL'S LAVENDER WATER.

A Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each.

GOODALL'S PLATE POWDER.

For Polishing and Cleaning all Metals. Boxes, 6d., 1s. and

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In 1/2- and 1-pint
boxes, 3d. and 6d. each.

PROPRIETORS—GOODALL, BACKHOUSE & CO., LEEDS.

PATENT MEDICINES

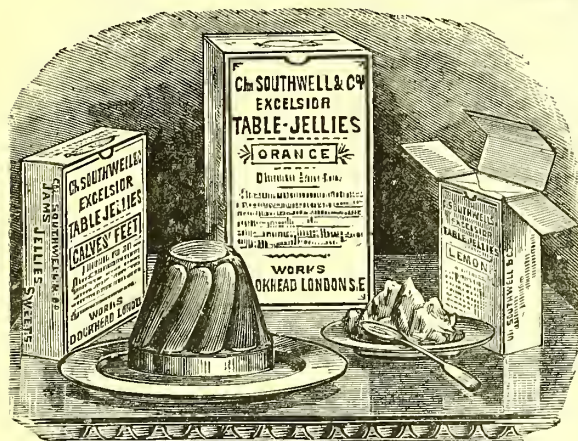
AND

DRUGGISTS' SUNDRIES.

Monthly Price List of Patent Medicines, Druggists' Sundries,
&c., will be sent post free on application to

GOODALL, BACKHOUSE & CO., LEEDS.

CHAS. SOUTHWELL & CO. "EXCELSIOR" TABLE JELLIES IN CARDBOARD BOXES.



Flavours—Orange, Lemon, Calves' Feet, Vanilla, Raspberry, and Noyeau.
HALF-PINTS, 1/9 per doz.; PINTS, 3/3 per doz.; QUARTS, 6/- per doz.

WHOLESALE AND EXPORT MANUFACTURERS OF
**JAMS, JELLIES, MARMALADES, CANDIED
PEELS, BOTTLED FRUITS.**
DRIED ORANGE-PEEL FOR DRUGGISTS.

The "EXCELSIOR" JELLIES can be obtained from F. NEWBURY & SONS,
1 & 3 King Edward St., E.C.; JOHN SANGER & SONS, 439 Oxford St., W.; and
Messrs. BARCLAY & SONS, LIMITED, 40 Farringdon Street, E.C.; also direct
from the Works,

DOCKHEAD, LONDON. S.E.

TYRER'S SAUCES AND "BOROUGH" KETCHUP

GOOD
VALUE

THE GIANT 1d. BOTTLE OF SAUCE.
LARGEST IN THE TRADE.

In Half-Gross Boxes, at 6/6 per Gross.*

"BOROUGH" KETCHUP, WORCESTER, HARVEY, YORKSHIRE
OR READING SAUCE.

1d. Sample Bottles, dozen parcels	per gross 5/	extra quality 6/
1d. Giant Bottles, dozen parcels	" 5/6	" 6/
1d. Giant Bottles, dozen parcels	" 6/	" 8/
1d. Bottles (flat or round), reputed 1-pint	" 6/6	" 8/
1d. Bottles (flat or round), reputed 1-pint	" 16/	" 24/
1d. Bottles (flat or round), reputed 1-pint	" 26/	" 32/
1d. 1-pint Imperial Round Stoppered Bottles	" 30/	" 36/
1d. 1-pint Imperial	" 50/	" 60/
12 1/2-gallon Casks (casks free)	each 20/	" 32/

ROYAL CAFÉ SAUCE.

In 8-oz. square-stoppered bottles, 48/- per gross.

A rich, fruity Sauce of fine flavour, and worth especial attention, as being the most saleable in the market.

Samples of any kind Sent Free of all Cost by

PETER TYRER,
The "Borough" Ketchup and Sauce Maker,
70 LONG LANE, BOROUGH, LONDON, S.E.

SCOTCH AGENCY: 113 WEST NILE STREET, GLASGOW.
Also Sold by W. & C. PANTIN, Upper Thames Street, LONDON, E.C.
BURGOYNE & CO., 16 Coleman Street, London, E.C.
JOS. TRAVERS & SONS, 119 Cannon Street, London, E.C.

BATGER & CO., LONDON,

SOLE MAKERS OF THE

NONPAREIL TABLE JELLY AND NONPAREIL BLANC MANGE

IN CARDBOARD BOXES.

Acknowledged to be the best Concentrated Jelly and Blanc Mange in the Market.

FLAVOURS—

Lemon, Orange, Calf's Foot, Vanilla, Raspberry, Strawberry, Noyeau, Black Currant, and Pine Apple.

Half pints, 1/9 per doz.; pints, 3/3 per dozen; quarts, 6/- per dozen.

ROBINSON'S ORANGE WINE.

Specially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application.

PHARMACEUTICAL SHERRY WINE.

This Wine is well adapted for Pharmaceutical Preparations, and is the strength ordered by the B.P. Price, in 6-Gallon Casks, 5/6 per gallon; in 2-Gallon Jars, 6/- per gallon, carriage paid. Casks charged 7/6, Jars 2/6, and allowed if returned. Cash or satisfactory reference to accompany order.
B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester.

"RAMORNIE." LIEBIG'S Extract of Meat.

As supplied to the War Office.

1-lb. Jars.....per lb.	6/2	.....per doz.	74/0	2-oz. Jars.....per lb.	7/0	.....per doz.	10/6
1-lb. Jars....."	6/4	....."	88/0	1-oz. Jars....."	7/8	....."	5/6
4-oz. Jars....."	6/7	....."	19/9	1/2-oz. Jars....."	9/0	....."	3/0

QUOTATIONS FOR EXTRACT IN "BULK" ON APPLICATION.
Write for Detailed Price List to the Australian Meat Co., 9 and 11 Fenchurch Avenue, E.C.

6 lbs. Carriage Frs.

TOWER TEA.

A MOST VALUABLE AGENCY.

TOWER TEA.—Only the choicest kinds, selected from the London import market, are used. Absolute reliance can be placed on its perfect purity and uniform high quality.

TOWER TEA.—Used by thrifty housekeepers; sold by enterprising agents in every town in the United Kingdom, who find it a profitable Agency.

REGISTERED.



Tower Tea

NOTE. THE ABOVE TRADE MARKS APPEAR ON EVERY PACKAGE.

TOWER TEA.—HUNDREDS OF TESTIMONIALS from all parts of the kingdom speak to the excellent character of this Tea, its popularity with all classes, and the high value of the Agency. A representative selection of these testimonials has been published, and can be had on application, with samples of undermentioned Teas; also the little pamphlet, "A Short History of Tower Tea"; and the book of pictures, "Voyage and Adventures of Ah-Chin-Chin" (1s.).

TOWER TEA, 1s. 4d.	per lb. (retail price)	Sound Wholesome Tea.
TOWER TEA, 1s. 8d.	" "	Powerful Tea, whole and semi-leaf.
TOWER TEA, 2s.	" "	Fine First Crop Tea, from India, China, and Ceylon.

WHERE VACANCIES MAY EXIST, AGENTS ARE APPOINTED BY

THE GREAT TOWER STREET TEA CO., LD.
3 JEWRY STREET, LONDON, E.C.

Telephone Number, 1852.

Telegraphic Address—CHEMICUS LONDON.

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Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	AGENCIES ABROAD Australian Drug Co. Ball, Hobson and Co. Cocking and Co. (Japan) Felton, Grimwade and Co. (Melbourne) Fougera and Co. (New York) Kempthorne, Prosser and Co. (New Zealand) Lennon, B. G., and Co. Peake, Allen and Co. Quattrone, A. R. Roberts (Paris, &c.) Rocke, Tempist and Co. (Melbourne) Soul, W. H., and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	APPARATUS Bracher and Co. (Automatic Distilling) Clarke, S. (Food Warmer and Bed Tray) Dunsford, H. (Food Warmer) McHugh, B. and E. (Lemon Squeezer) Orme (Scientific) Perken, Son and Rayment Rothermel, Paul (Vinegar)	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	AMMONIA May and Baker. White, A., and Sons Woolley, Sons and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT (See SYPHONS AND ESSENCES.) Barnett and Foster Brathby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Ferre, T. Guertel Freres Tyler, Hayward, and Co.	ALMANACKS Ford, Shapland and Co. Silverlock, H. Townsend, J.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse and Co.	BOTTLES Aire and Calder Bottle Co. (Lim.) Barnett and Foster Barrett, R. H. Brathby and Hinchliffe Brell's (Lim.) Evans, Sons and Co. Fitch, W. B., and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Issues and Co. Kilner Bros. Lang, Jonas, and Co. Lang, Jules, and Co. Maw, Son and Thompson Potus, H., and Co. Sanders, H. G., and Son Shirley, A. W. Toogood	CAMPOR Howards and Sons May and Baker	CARMINE Bush, W. J., and Co. Sellers, J.	CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Ferris and Co. Moss, J., and Co. Squire and Sons	CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S., Son and Thompson Robertson, J., and Co.	DITTO PLANT</
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CATALOGUE

Evans, Sons and Co.
Lynch and Co.
Maw, Son and Thompson, S.
May, Roberts and Co.
Newbery, F., and Sons
Sawyer and Son

CEMENT

Foulkes, W. J.
Kay Bros., Lim.
CHALK PRECIP.

Dunn and Co.
Levermore, Aug., and Co.
White, A., and Sons.

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Bramwell and Son
Brunner, Mond and Co., Lim.
Bush, W., Son and Co.
Dunn and Co.
Fletcher Fletcher and Stevenson
Fuerst Bros.
Gaskell, Deacon and Co. (Bicarbonate of Soda)
Goodall, Backhouse and Co.
Greiff and Co.
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Howards and Son (Pharm.)
Kuhn, B.
Levermore, Aug., and Co.
Lothouse and Saltmer
May and Baker
Morris and Callard
Moss and Co.
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Stern, G. and G. (Pumiline)
Smith, T. and H., and Co.
White, A., and Sons
Zimmermann, A. and M.

CHEST PROTECTORS

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Sauger and Sons
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Wood, V.

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Burroughs, Wellcome and Co.
Hooper, B., and Co.

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Towle, A. P., and Son

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Macfarlan, J. F., and Son
Smith, T. and H., and Co.
Wright, Layman and Umney
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Hassalls (Phospho)

COCAINE-HYDRO.

Howards and Sons

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Ambrecht, Nelson and Co.
Evans, Sons and Co.
French Hygienic Soc.

COCOA & CHOCOLATE

Amsterdamische Chinine
Fabrick
Cadbury Bros
Fry and Sons
Rowntree and Co.
Scheibler Bros. and Co.
Van Houten's Cocoa

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Brekke and Howld
Burroughs, Wellcome and Co.
Evans, Sons and Co.
Hill, A. S., and Son
Jensen, J., and Co. (Limited)
Lothouse and Saltmer
North Medicine Co.
Smith, T. J.
Woolley, Sons and Co.
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Maw, Son and Thompson, S.
Robinson, B.
Seabury & Johnson (Plasters)
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Mumford, G. S.

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Maw, Son and Thompson, S.
Newbery and Sons
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Lynch and Co.
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May, Roberts and Co.
Sanger and Sons
Schutze and Co.
Thompson, Walters, Hole

Toogood, W.

Warren, A. and J.
Wood, Vincent

DRUMS, CANS, &c.

Noakes and Co.

DYES

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Prunk, Davis and Co.

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Berry, F. H.
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EMBROCATION

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Stallman and Filton
Stevenson and Howell
Synes and Co.
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Duncan, Floekhart and Co. (Chloric)
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May and Baker
Robins

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Brathby and Hinchliffe
Burgoyne, Burhidges and Co.
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Carter and Wright
Cummock, J.
Duckworth and Co.
Goodall, Backhouse and Co.
Hay, W.
Idrie and Co.
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Brand and Co.
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Wright, Layman and Umney

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Downie, B. I. P. Co.

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Hearu, E. A., and Co.
Hockin, Wilson and Co.
Kliner Bros.
Maw, Son and Thompson, S.
Marriot, E., and Co.
May, Roberts and Co.
Thompson, Walters, Hole and Co. (Limited)
Toogood, W.

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Solport Bros.

FLY PAPERS

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Silicated Carbon Filter Co.

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Benger's Pancreatised
Brand and Co.
Dahl's Dyspepsia Cakes
Goodall, Backhouse and Co.
Hearon, Squire (Malting)
Johnston's Fluid Beef (Lim.)
Liebig Co.
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Ridge's, Dr., Food

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Kimmond and Co.
Mills, E. M.

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Price's Candle Co.
Van Geelkerken and Co.

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Bush, W., Son and Co.
Curtis and Co.
Evans, Sons and Co.
Hearon, Squire and Francis
Hill, A. S., and Son
Kerfoot, T.
Wright, Layman and Umney

GUMS

Fink (Arabic, &c.)
Levermore Aug., and Co.
Prunk, Davis and Co.

GUTTAPERCHA

Duncan, Floekhart and Co.
Hair Prep.

Bates, F. W.
Brodie, J. (Imperial Hair Dye)
Chesbrough Mfg. Co.

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Newball and Mason
Oldfield, Pattinson and Co.
Potter and Clarke

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Butler, McCulloch and Co.
Newball and Mason (Extract of Herbs)
Potter and Clarke (Extract of Herbs)

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Gould, E. and Son
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 Warren, A. and J.
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Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).
December 15, 1888.

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APRIL 13.

[1889.

Reports upon The Best Extract of Malt.

THE LANCET.

The *Lancet*, after due inquiry and investigation, reported upon the Kepler Extract of Malt as follows:—"It is the best known and, in this country, the largest used Extract of Malt. It is as distinct an advance in therapeutics as was the introduction of cod-liver oil. It is one of our best nutritive and digestive agents for chronic dyspepsia, and is undoubtedly useful in consumption and other wasting diseases."

In the above dictum we find the gist of the whole matter in a nut-shell, and very naturally it may be asked—what is this Extract which the *Lancet* pronounces the best known and largest used? What is this product that is as distinct a step forward as the discovery of Cod-liver Oil? What is the nature of this nutritive and digestive agent, undoubtedly useful in wasting diseases? The answer is simply—it is an improved, refined, condensed, highly nutritious and easily assimilable food that has been used for untold ages. It is an advance upon the "tysan" of antiquity, quite as great and substantial as the improvement "Tabloids" is upon primeval modes of medication. It is an Extract of the choicest Barley Malt, which has been made by straining an infusion of the best malted barley, evaporating the liquid *in vacuo* and condensing it by very special and improved methods. So great a food is barley that some have endowed it with the dignity of medicinal properties. Well may the *Lancet* pronounce it "as distinct an advance in therapeutics as was the introduction of Cod-liver Oil." The great Liebig considered malted barley the greatest discovery in the matter of infant feeding.

THE LONDON MEDICAL RECORD.

The *London Medical Record* says:—"The Kepler Extract is the best, richest in diastase, and the most largely used. We have witnessed the processes, have tested it, and are satisfied that it is not only unsurpassed, but unequalled. It is the Extract of Malt which every physician now prescribes."

It will be observed that in this quotation the verdict is the same as in that from the *Lancet*, viz., that "Kepler's is the best." But it is further pointed out that it is the richest in diastase. Now, of all the grains barley is pre-eminently the one rich in diastatic ferments. Before this one grain, diastatically, all other grains are merely chaff, and in malting a combination of them the barley's diastase is ordinarily relied on to do the work. As is well known,

the action of malt diastase is the same as that of the saliva and of the pancreatic juice, viz., to convert starch into sugar. When the food is bolted, the saliva has no time for action, indigestion ensues, and it is in such cases that the Kepler Extract has been found useful, for "it is not only unsurpassed, but unequalled."

The *London Medical Recorder* confirms the quotation already transcribed, as follows:—"The Kepler Extract of Malt speedily improves the power of assimilation, and in cases of consumption, scrofula, and many of the wasting diseases of children, a wonderful improvement in the patient's condition may be noticed after a fortnight's treatment." We have here a typical example of how physician after physician has reported upon this product. No more trying chronic ailments are daily encountered than consumption, scrofula, and the wasting diseases of children. When cod-liver oil has failed, and the food is disagreeing, and medication proves worse than useless, the Kepler Extract affords a recourse sure and steadfast—one which gives promise of an improved condition after a fortnight's treatment. It improves the digestion, and upon this follows improved assimilation and nutrition, both of which give rise to a better appetite: this in turn again carries the improvement onward.

MEDICAL TIMES AND GAZETTE.

The *Medical Times and Gazette* reports as follows;—"The Kepler Extract of Malt is deserving of special commendation. It is, we venture to say, by far the best we have seen, the one most widely known and most largely used. By their new process, which includes evaporation at an unusually low temperature, all of the diastase is fully preserved, and the Kepler Extract of Malt will be found unequalled in its power of digesting starchy or farinaceous foods." Why is the Kepler Extract of Malt deserving of special commendation? First of all, because it is made from the choicest barley only. Second, because barley contains more choice ingredients obtainable by malting than any other grain. Third, because no grain malts like barley. Fourth, because the Kepler Extract is prepared at every stage by the most improved and scientific processes. Fifth, because nothing is wasted, and all the digestive, nutritive, and alterative principles of the grain are secured. Sixth, because nothing insoluble and indigestible is retained. Seventh, because in taste it is as delicious as honey. Eighth, because in the system none of it is lost, and it is all easily absorbed.

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Trinitrine.—"Trinitrine is the new name for nitroglycerine, the general adoption of which has been advocated by Dujardin-Beaumetz, Huchard, and other Continental observers.—*Its occurrence in prescriptions is less likely to alarm the susceptibilities of delicate, nervous, or highly-strung patients than the more commonly employed term.* The Tabloids of Compressed Trinitrine are made with sugar of milk, which is admirably adapted for the purpose, and dissolves much more rapidly than any of the ordinarily employed excipients. We have made trial of these new tabloids, and find that they answer admirably in cases of angina-pectoris, giving prompt relief to the paroxysms of pain. The Compound Trinitrine Tabloids, containing, in addition to nitroglycerine, nitrite of amyl, menthol, and capsicum, constitute a valuable preparation, and will, in all probability, speedily replace the official formula."—*Lancet*, April 24, 1886.

In full doses Trinitrine accelerates the heart's action, dilates the arterioles, flushes the face, and produces headache. Too large a dose may cause languor, nausea, pain in the stomach, and occasionally even temporary unconsciousness.



TABLOIDS.

		To the Trade.		
		Gr.	In bot.	Retail Doz.
Trinitrine (Nitroglycerine)	.. 1/100	25	.. 1/	7/
"	.. 1/100	100	.. 2/	18/
"	.. 1/50	25	.. 1/	7/
"	.. 1/50	100	.. 2/	18/
Trinitrine and Amyl Nitrite	—	25	.. 1/6	12/
"	—	100	.. 4/	36/
Trinitrine Comp.	Trinitrine	.. 1/100		
	Nitrite of Amyl	1/4		
	Capsicum	.. 1/50	25	.. 1/6 12/
	Menthol	.. 1/50		

BURROUGHS, WELLCOME & Co, SNOW HILL BUILDINGS, LONDON, E.C.

Spiritus Ætheris Nitrosi.

Guaranteed to contain the proportion of Nitrous Ether directed by the British Pharmacopœia.

Æther Nitrosus and Sol. Ætheris Nitrosi.

Respectively 8 and 4 times the strength of the Spirit.

Sol. Æthyl Nitritis.

Containing 3 per cent. of Pure Nitrite of Ethyl, in Absolute Alcohol and Glycerine.

See paper by Professor LEECH on "The comparative effects of Spiritus Ætheris Nitrosi and Solution of Ethyl Nitrite," *Pharmaceutical Journal*, December 22, 1888.

Spirit. Ammoniaë Aromaticus.

Made from Volcanic Ammonia.

JAMES WOOLLEY, SONS & CO.

Manufacturing Pharmaceutical Chemists,

MANCHESTER.

Laboratories and Drug Mills, Knowsley Street, CHEETHAM.

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ESTABLISHED 1859

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BRANCH OFFICES:

MELBOURNE, SYDNEY, AND NEW YORK.

Published every Saturday.

Subscription 10s. per year, payable in advance; dating from the commencement of any month.

Supplied only to persons connected with the Trade.

Post free to every country in the world. Single copies 4d. each.

Cheques or Postal Orders should be payable to EDWARD HALSE, and crossed MARTIN & Co.

Supplied regularly to every member of the following Societies, who have adopted THE CHEMIST AND DRUGGIST as their official organ:—

The Pharmaceutical Society of New South Wales.

The Midland Pharmaceutical Association of New Zealand.

The Pharmaceutical Society of Queensland.

The Pharmaceutical Society of South Australia.

The Hobart Chemists' Association.

The Launceston Pharmaceutical Association.

South African Pharmaceutical Association.

For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

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THE CHEMIST AND DRUGGIST will be published a day earlier than usual next week in consequence of Easter. Advertisements for assistants, situations, &c., such as are inserted in the Supplement, will be received next week until Thursday morning, first post, only; advertisements for Exchange Column, and all other matter, must be received by Wednesday.

SOME correspondents who have written to us respecting the motion announced in the House of Commons by Mr. C. W. Gray, M.P. for the Maldon division of Essex, "to call attention to the sale of patent medicines," do not seem to have observed the report on page 496 of our last issue, stating that Mr. Gray declined to give information as to the purpose of his motion, and that he has withdrawn it for the present session. He intimated his intention of bringing it forward again next year.

A MEMBER of our Melbourne staff is again with us at 42 Cannon Street, and will be glad to discuss Australian business with any firms who may think his special knowledge might be useful to them.

NEW OFFICE AT SYDNEY, N.S.W.—Our Australian staff have found it necessary to take an office at Sydney, N.S.W. This is situated at 13 Queen's Chambers, Barrack Street.

News.

THE Chesterfield woman, Mary Ann Whitfield, who is charged with poisoning her child Ernest for the sake of the insurance money, has been committed for trial.

RAILWAY RATES.—Replying to a question in the House of Commons, on Thursday, Sir M. H. Beach said that objections would be heard at the Board of Trade, according to the usual custom, but in order to meet the convenience of parties from Scotland and Ireland he proposed also to make arrangements for hearing cases in Edinburgh and Dublin.

EXTERNAL APPLICATIONS have lately been killing many people through improper use. Last Monday a man of 53 died in the London Hospital from the effects of a quantity of compound camphor liniment which he swallowed intentionally; and on Tuesday morning an old man of 77 died at Camberwell in great agony, after taking a dose of a lotion instead of a bronchitis mixture, both of which he had got from his medical attendant.

CARBOLIC-ACID POISONING.—Three cases to report this week. At Liverpool on Monday a brickmaker on the spree found a whisky-bottle lying in the back-yard, and drank some of its contents. He thought the liquid was whisky, but it was carbolic acid, and it killed him in a few hours. At the Portland Chambers, Wells Street, W., on Tuesday, a draper's assistant out of employment was found dead in his room. He had committed suicide with an ounce of carbolic acid. A man named Purcell, an army pensioner, residing at Duke Street, Oldham Road, Blackburn, died last week from the effects of carbolic-acid poisoning. The man had been drinking, but it did not appear whether he took the acid designedly or by accident.

LEAD POISONING.—Those interested in lead-poisoning by public water supplies will find in the report of the medical officer to the Local Government Board a valuable paper on the subject by Mr. W. H. Power. The Sheffield water service is specially referred to, and Mr. Power suggests that the phenomena of lead-poisoning seem to require for their explanation not so much the existence of agencies uniformly at work, but rather the operation of circumstances varying very much as vital processes, especially morbid processes, vary; and he raises the question whether the life processes of low animal or vegetable organisms may not be concerned with the problem of how water may obtain and how it may lose its solvent action upon lead.

THE Committee of the Royal Institution of Great Britain, Albemarle Street, announce some interesting lectures for the Friday evening meetings after Easter. On May 3 Sir Henry E. Roscoe, M.P., will discourse on "Aluminium"; on May 10 Professor Dewar will describe the "Optical Properties of Oxygen and Ozone"; and on May 31 Professor Demetri Mendeleef, LL.D., D.Sc., Professor of Chemistry at the Imperial University of St. Petersburg, Councillor of State, and Knight of the Order of Anne, will lecture on "An attempt to apply to Chemistry one of Newton's Principles." Among the course of lectures announced are four on "Some Recent Biological Discoveries," by Professor E. Ray Lankester, on Tuesday afternoons, beginning May 21; and a course of five on Thursday afternoons by Professor Dewar, on "Chemical Affinity," beginning on May 16.

THE IRISH PHARMACY BILL.—At a meeting of the committee of the Dublin Chemists and Druggists' Association, on Thursday night, a letter was received from the Belfast Association suggesting that a joint deputation from the Irish Pharmaceutical Council and this association should meet them in Belfast to finally arrange for introducing the proposed Bill. The Pharmaceutical Council now proposes that the registration of those in business without examination should be limited to those in the trade before January 1, 1888. A long discussion ensued. It was the unanimous opinion that the date should not be altered from that originally agreed on, viz. the date of the passing of the Act proposed by Mr. Johnstone. The Belfast suggestion was agreed to, and Messrs. McNeight (president) and Boyd (vice-president) were appointed to go to Belfast if necessary, Thursday, April 18, to be the date of meeting.

CORNER FOR STUDENTS.

CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

THE subject of the exercise in qualitative analysis for this month will be a mixture of two salts. The mixture is to be submitted to a thorough systematic examination, designed to detect the actual constituents of the mixture, and to demonstrate the absence of all other substances. Students' reports should contain a concise account of the work done, and should include a list of the metals and acid radicles detected, distinguishing any which may be regarded as accidental impurities.

Students' applications for portions of the mixture of salts will be received up to the morning of next Wednesday, April 17, and the samples will be forwarded immediately.

Students' reports will be received up to Wednesday, May 1.

REPORTS.

The mixture of salts distributed for analysis last month consisted of equal parts of ferrous sulphate and potassium chromate. The calculated composition of 100 parts of this mixture would be:—

Fe	..	..	..	..	..	10.07
K	..	..	..	..	..	20.08
CrO ₄	..	..	..	..	..	29.92
SO ₄	..	..	..	..	..	17.27
H ₂ O	..	..	..	..	..	22.66
						<u>100.00</u>

The number of reports sent in this time was fifty-three; fifteen of these may be described as good analyses, and the remaining thirty-eight were more or less incorrect. Twenty-four students failed to detect the sulphuric radicle, twelve failed to detect chromium, four potassium, and one only was unable to find any iron in the mixture.

There are few substances so easily detected and recognised as sulphuric acid, and it is remarkable that such a large proportion of our contributors as one in every three should have failed to detect the sulphuric radicle, which was present to the extent of more than 17 per cent. One of the causes of error was the presence of a chromate in large quantity. When barium chloride was added to a neutral solution containing both the sulphate and the chromate, however this solution may have been prepared, a copious precipitate was formed. On adding hydrochloric or nitric acid to see if this precipitate was soluble in acids, so much of the precipitate dissolved that it seemed not unreasonable to suppose that it would all disappear, and we can imagine students concluding that they had performed the experiment badly, and that if they had only taken proper precautions the entire precipitate would have behaved itself properly, and dissolved at once. A certain number of our correspondents could not well have made any mistake in the detection of sulphuric acid when they came to the barium-chloride test. In the preliminary examination they found that when the substance was fused on charcoal with sodium carbonate a sulphide was produced, and could be recognised on adding an acid either by its smell or by the property it has of blackening silver. This piece of information pointed to the presence of sulphur in some form or other, and prepared the student for its detection as a sulphate when the barium-chloride test was applied.

PRIZES.

The First Prize for the best analysis has been awarded to F. J. ALLEN, 1 George Street, Plymouth.

The Second Prize has been awarded to A. H. MCCONNELL, 10—2 Russell Chambers, Bury Street, Bloomsbury, W.C.

Marks Awarded for Analyses:

F. J. Allen (1st prize) ..	103	F. N. Whitehead ..	73
A. H. McConnell (2nd prize) ..	98	Nosirrah ..	73
H. Hamer ..	95	T. R. Dodgson ..	73
A. Shaw ..	95	Moyhitt ..	72
A. L. N. M. ..	93	Carbon Bisulph. ..	71
H. Bowden ..	93	G. W. West ..	68
Alum ..	93	Festina Lente ..	68
H. W. Colley ..	90	G. Myers ..	65
Chisel ..	90	Nemo ..	63
Crucible ..	90	Princes ..	60
A. Lazenby ..	90	A. J. S. ..	60
Scopoline ..	88	Superna Sequar ..	60
Crumpsall ..	88	W. G. Wilkinson ..	55
Potassium ..	85	J. Howie ..	53
Cicero ..	85	W. E. Fairweather ..	50
A. W. B. ..	85	J. Simpson ..	50
A. M. S. ..	85	Elixir ..	50
Danwer ..	85	Titanium ..	50
N. S. ..	80	James Gill ..	40
F. W. Towan ..	73	Silver ..	40
Magnes. Carb. ..	78	Novice ..	40
Kensington ..	78	Dextrine ..	30
W. Asten ..	76	Lward ..	30
A. W. Sikes ..	75	J. Thompson ..	30
Hereward ..	75	Aspirant ..	25
Ajax ..	75	Dumnorix ..	0
J. E. W. ..	75		

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

. All communications should include the names and addresses of the writers.

A. L. N. M.—The quantity of potassium was large, and therefore you found no difficulty in detecting it in the original solution; but that was not the proper place to look for this metal: it should be sought for in the solution remaining after the separation of the last group. This solution, if the analysis had been properly conducted, could only contain the alkali metals and magnesium, along with ammoniacal salts, which are easily removed.

CRUMPSALL.—It is necessary to send in your application for a sample of the mixture for the next analysis in the regular course and at the proper time.

A. M. S.—See remarks to "A. L. N. M." Your difficulty probably arose from the fact that the greater part of the potassium existed in the residue as sulphate, whereas to precipitate the metal properly it should be in the form of chloride. The sulphuric radicle may, in such cases, be removed by the addition of barium chloride, and the excess of barium may be precipitated as carbonate.

DANWER.—The barium-chloride precipitate was too marked to be attributed to a mere trace of sulphuric acid. The white precipitate thrown down in a solution acidulated with nitric or hydrochloric acid appeared to be yellow because it was seen through an intensely yellow medium.

F. W. TOWAN.—When you added barium chloride to the neutral solution a large precipitate was produced consisting of both chromate and sulphate. On adding an excess of hydrochloric acid the greater part—the chromate—dissolved, but the sulphate must have remained undissolved.

MAGNES. CARB.—You state that nitric acid was detected in the original solution, but the only original solution described in your paper is one which you prepared with the aid of nitric acid.

W. ASTEN.—We have carefully repeated your experiment, and cannot imagine how you could have concluded that the barium-chloride precipitate was entirely soluble in nitric acid.

F. N. WHITEHEAD.—The brown powder consisted largely of ferric chromate; this compound was produced immediately on mixing together the finely powdered potassium chromate and ferrous sulphate.

T. R. DODGSON.—Your examination for the acids was most imperfect; it is necessary to prove either the presence or the absence of each of the

acidulous radicles of ordinary occurrence. You seem to have supposed that there could not be more than one salt in the portion soluble in water and one in the insoluble portion. This was quite a mistake.

MOYHITT.—It is not in the least strange that you failed to detect the sulphuric radicle, as you never looked for it.

NEMO.—You must have noticed the deep yellow colour of the solution of the mixture. The composition you assigned to the mixture would not account for this colour. You did not pass sulphuretted hydrogen through the solution long enough, or you would have observed that it changed from yellow to green, and that sulphur was thrown down—a reaction characteristic of chromates.

SUPREMA SEQUAR.—See remarks to "Nemo." When the violet flame colouration of potassium can be observed with the aid of a blue glass you may be sure that there is very little sodium present, if any.

J. HOWIE.—You examined the precipitate produced by ammonium chloride and ammonia for iron only, consequently chromium had no chance of detection.

W. E. FAIRWEATHER.—If silver had been present it is clear that the mixture would not have dissolved in dilute hydrochloric acid.

J. SIMPSON.—Before using a platinum wire for the observation of flame colouration, it should be ignited until it ceases to impart the slightest colour to the flame, and you must be careful not to touch the wire with your fingers after the ignition, or the wire will be soiled.

TITANIUM.—In preparing a solution of the mixture you observed that a brown precipitate was thrown down, and that the solution was yellow, and as you had noticed a similar precipitate and yellow solution after the addition of ammonium chloride, and ammonia to some other liquid, you concluded that the brown precipitate ought to be submitted to the same treatment as if it had been thrown down by ammonia as a group reagent. This is test-tubing with a vengeance, and it shows a total ignorance of the first principles of chemical analysis. It is remarkable that with such a vague idea of chemistry you were able to obtain such a good result.

SILVER.—You did not give sufficient particulars of your work to admit of the cause of your errors in the detection of the acids being pointed out. It is clear that you mistook something—probably the escape of air-bubbles—for effervescence. Why the addition of calcium chloride to anything should cause fumes of nitric acid to be given off is quite incomprehensible.

DUMNORIX.—You certainly made a very bad attempt this time; but do not be discouraged. Your report shows that you can observe honestly; with a little more study of the reactions you will know better what to observe.

Metropolitan Reports.

SALE OF FOOD AND DRUGS ACT.—At Edgware Petty Sessions Arthur Moody, of Pinner, manager to Messrs. Kingham & Sons, grocers, was charged with having assaulted an inspector, who had bought some coffee from him. When told that the purchase had been made for analysis Mr. Moody tried to recover the coffee, and, in the attempt, a technical assault was committed. Mr. Moody had to pay 20s. for the assault, 5s. damage, 4d. the value of the coffee, and costs 3*l.* 1*s.* 6*d.*

DISINFECTANTS FOR CLERKENWELL VESTRY.—On April 4 the Clerkenwell Vestry considered tenders for the supply of disinfectants for the ensuing year. Messrs. Adeock, Easton & Co.; Messrs. Adams, Webster & Adams; Messrs. J. M. Smith & Co.; McDougall Brothers; and F. C. Calvert & Co., sent in prices, and those of Messrs. Adeock, Easton & Co. were accepted as follows:—95 per cent. of clear carbolic acid fluid, free from tar oils and sulphuretted hydrogen, at 1*s.* 4½*d.* per gallon; 70 per cent. soluble carbolic-acid fluid, free from tar oils and sulphuretted hydrogen, at 11*d.* per gallon; 10 per cent. carbolic disinfecting powder, free from tar oils and sulphuretted hydrogen, at 4*s.* per cwt. This was the lowest tender, the highest prices being 2*s.* 7½*d.*, 2*s.* 4½*d.*, and 7*s.* respectively. Dr. Theophilus Redwood, of 2 Fisher Street, Red Lion Square, was appointed analyst to the vestry for the year ending March 25, 1890.

A CHEMIST'S DIFFICULTIES.—In the City of London Court on Saturday, the case of Gibbs v. Moore was heard at further length before Mr. Commissioner Kerr. The case was partially reported in *THE CHEMIST AND DRUGGIST* last week. The litigation was brought at the instance of Messrs. D. & W. Gibbs, of Milton Street, E.C., who sought for the committal to prison of the defendant, Mr. Albert Moore, chemist, 199 High Street, Fulham, for the non-payment to them of the sum of 10*l.* 9*s.* 7*d.* On the last occasion the

Court was placed in full possession of the defendant's position, which, according to the statement of a friend of his, was anything but a prosperous one. It was stated that the defendant had a great many debts, and that the profits of his business as a chemist did not exceed 50*s.* per week, but he occasionally added to this by taking in dogs and treating them veterinarily. He offered to pay the debt by instalments of 10*s.* per month. The Court thought a list of the defendant's debts should be produced, and the case was adjourned for that purpose. On Saturday another friend, Mr. Hugo Beckett, appeared for the defendant. He did not produce the defendant's debts set out in full as ordered, because he said it had been arranged to pay the plaintiffs gradually, and he thought nothing more would be done in the matter, and that the Court would not again be troubled. Mr. A. Baylis, the plaintiffs' representative, said their solicitors received a call from someone on behalf of the defendant, offering 10*s.* down, and 10*s.* per month, which had been agreed to. They would take that order if His Honour would make a committal order, so that if the defendant did not pay he would be taken to Holloway Prison. Mr. Commissioner Kerr: That would make the order bad in law, and make you liable to an action for false imprisonment, as well as myself. You don't understand that? No; I daresay you don't. Happily you are not a lawyer—and even they don't understand it, some of them. An order was made by consent for payment of 10*s.* down, and 10*s.* per month afterwards.

MR. SPINK AND HIS MEETINGS.—At Bow Street, before Mr. Bridge, on April 5, Mr. Harry Nelson Bowman Spink, chemist, of 3 Marsham Street, Westminster, appeared to two summonses charging him with using part of the Pimlico Radical Club, where intoxicating liquors were supplied, for the purpose of holding meetings to promote and procure his election and that of the Rev. Arthur Whitaker Oxford to serve on the School Board for London. There were also two summonses for meetings held at the Westminster Liberal and Radical Club and the St. George's Liberal Club. Mr. F. C. Gore and the Hon. John D. Grey prosecuted on behalf of the Public Prosecutor; Mr. Lynn defended. The proceedings were instituted under section 20 of the Corrupt Practices Act. The defendant and the Rev. Mr. Oxford were candidates for the Westminster division of the School Board, and Mr. Oxford was returned at the head of the poll, the defendant being second, out of six candidates. A petition was presented charging them with holding meetings on premises where intoxicating liquors were sold, and both candidates were unseated. A certificate giving an immunity from all criminal proceedings against Mr. Oxford was granted, but was refused in the defendant's case. The present proceedings were accordingly instituted. Mr. Lynn addressed the magistrate in mitigation of the punishment, and pointed out that the defendant had already been put to great expense by paying the costs of the commission and had been prevented from taking part in public life for the next five years. Mr. Bridge: That is very likely a gain to him. (Laughter, in which the defendant joined.) Mr. Lynn, however, urged that, although the commission had not accepted the view that it was through inadvertence, the defendant had taken every precaution, as he thought, to keep himself within the law. Mr. Bridge said the object of the prosecution—the first of the kind—was to caution future candidates as to how the law stood. The maximum penalty was 100*l.*, but he thought it would be sufficient punishment in this case to impose a fine of 5*l.* and 5*l.* 5*s.* costs. The amount was paid.

MERCURIC CHLORIDE AND FOWLER'S SOLUTION.—The *Druggists' Circular*, replying to a querist, says:—The precipitate observed on mixing a solution of mercuric chloride with a solution of potassium arsenite consists of white mercuric arsenite. In the presence of an excess of potassium arsenite a portion of the salt is dissolved, while a portion of the mercury is reduced to the metallic state, and may be observed after a few hours as a heavy grey precipitate. When solution of arsenious acid is substituted for the solution of arsenite of potassium, the precipitate is not formed until after standing a few hours, but it is eventually thrown down. On adding an alkaline salt to the preparation so made, however, the same precipitate of white mercuric arsenite immediately makes its appearance.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

BIRMINGHAM.

MR. BEECH, Mary Street, has opened a pharmacy at King's Norton, and has placed in it his son, who acts as manager.

FEEDING-BOTTLES are being made for and sold by licensed victuallers for travellers who indulge in spirituous and vinous beverages during their peregrinations by rail or road.

MR. A. MOSS, pharmaceutical chemist, has joined the firm of Messrs. Newton & Co., Swan Village, and is engaged in the preparation of fruit and other essences used by mineral-water or other manufacturers.

OWING to the unfavourable weather, and consequent small attendance, the members of the M.C.C.A. are talking of having an additional social evening at the Colonnade during this or the next month.

DIPHTHERIA AND ITS ORIGIN.—At a meeting of medical officers held at the Council House on Friday of last week, Dr. Bostock Hill read a paper on "Diphtheria," in the course of which he argued that the complaint arose from what was called simple sore-throat. Dr. Underhill took exception to the theory that diphtheria had a bacillic origin. Chemical change was the cause of diphtheria, not the action of microbes. He admitted, however, that bacteria are always to be found in cases of diphtheria.

THE MIDLAND COUNTIES CHEMISTS' ASSOCIATION.—The bookcase ordered by the Association at a cost of 21*l.* is ready for delivery, and is to find a home at the Mason College, to put the museum and books in. Messrs. Wyleys have promised galenical preparations illustrative of B.P. pharmacy, and Messrs. Southall have consented to find materia medica of organic origin. A meeting of the Association will be held on Tuesday next, at 8.30 P.M., at the Mason College, when a paper will be read by Mr. J. F. Liverseege, A.I.C., on "Energy."

CHEMISTS AND EARLY CLOSING.—An effort is about to be put forth to induce chemists in the city to close early one day in the week, or to adopt other means to give their assistants reasonable time for recreation. The Early Closing Association has not, up to the present, included chemists within their ranks. A chemist's assistant writes a letter to a Birmingham paper in which he expresses surprise that the Early Closing Association canvassers do not call upon chemists. He thinks there is as much need for early closing in his trade as in any other. The chemists' assistants, he says, work on an average thirteen hours a day, with an addition of three or four hours on Sundays, so that they have little time for recreation and breathing of fresher air than that which is generated in a chemist's shop.

THE HALF-PINT QUESTION.—The following letter has been sent from the Midland Counties Chemists' Association to the General Council of Medical Education and Registration:—

Mason College, Birmingham.

April 9, 1889.

GENTLEMEN,—At a recent meeting of this Association, the question was raised by one of its members as to the meaning in prescriptions of the sign "Oss." He showed that he had endeavoured to ascertain the opinion of local medical practitioners, and that, out of twenty-eight replies to an inquiry, it was found that twelve physicians and surgeons intended eight ounces to be dispensed, and sixteen ten ounces. Under these circumstances the Council of this Association considers that the matter should be definitely settled by your honourable Council, and respectfully urges you to take such action as will relieve pharmacists from the serious difficulty under which they are now unavoidably placed.

I am, Gentlemen, your obedient servant,

GEO. E. PERRY,

President of the Association.

BLACKPOOL.

A BURGLAR IN A DRUG-STORE.—At the Blackpool Police Court on Monday, Jacob Barton was charged with various acts of shop-breaking, committed in Blackpool and Fleetwood. One of the places he was alleged to have entered was the drug-store of Mr. Edward Fletcher, 9A Talbot Road, Blackpool. Mr. Wm. Gwynne stated in evidence that he was manager for Mr. Fletcher. He left the shop safely locked up at 8 P.M. on March 29. At that time there was a safe in the shop containing about 28*l.*, consisting of a 5*l.* note, postal order for 20*s.*, and the rest in gold and silver. There was about 5*s.* in copper in the till. When he went into the shop at half-past eight next morning he found that the till had been robbed. He also missed the keys of the safe, which had been left in the cash drawer. He found that a pane of glass had been taken from a window at the back, and the lock on the door between the shop and the back room (where the window was) broken. The safe back had been taken out and the money stolen. On the various charges brought against him the prisoner was committed to take his trial at the Preston Quarter Sessions.

LINCOLN.

THE USE OF ARSENIC.—A man named Franklin was tried at Kesteven Petty Sessions on April 5 on a charge of having administered arsenic to horses belonging to his master, Mr. G. T. Melbourne, whereby two horses, valued at 50*l.* each, had died. The man declared his innocence, but was found guilty, and sentenced to three weeks' imprisonment. From the evidence it appeared that arsenic had been largely used in the process of drilling. The foreman said that on the first day they were drilling they gave the man walking behind the drill 2*st.* 6*lb.* of arsenic to use, on the second day they gave him 2*st.* of arsenic, and on the third day they gave him 25*lb.* Dr. G. M. Lowe, deputy coroner for Lincoln, who had made the necessary analyses, addressing the court, said some action should be taken to put a stop to the wholesale way in which arsenic fell into the hands of the public, and that action was the more necessary in Lincolnshire, where it was so extensively used by agriculturists. He might state that two important cases had come to his knowledge in which, not horses, but human beings were poisoned. The Act required that arsenic should be mixed with indigo or with soot, but he was told that it was understood by chemists if not more than a certain quantity were purchased it was not necessary to mix it with those materials. He wanted to suggest whether it would not be better always to mix it with soot or indigo, which would have the effect of preventing it being mixed with food. The chairman said he was glad Dr. Lowe had mentioned the subject, as he noticed that on one day 2*st.* 6*lb.* had been used. He wondered where the necessity was for using 2*st.* 6*lb.* in one day. It seemed an enormous quantity.

LIVERPOOL.

CHEMISTS' ASSISTANTS' SOCIETY.—The meeting on Tuesday evening, April 9, was of a social character. The committee has succeeded in obtaining suitable rooms in Colquitt Street, where future meetings will be held.

BUSINESS EXTENSION.—Messrs. Ainsworth, Clayton & Jowett, of Blackburn, have taken extensive premises in Concert Street, which they are fitting up with a view to extending their business as wholesale druggists and manufacturers of essences, extracts, &c., used by mineral-water makers.

SENSATIONAL ADVERTISING.—Mr. Gwilym Evans appears to find time to look after, not only the Pharmaceutical Council, but his company's business also. He is now distributing in quantity through Liverpool an advertisement of "the chief discovery of the age"—quinine bitters—in the form of a puzzle.

A FIRE occurred in the chemist's shop belonging to Mr. Faulds, Pitt Street, on Tuesday forenoon. While making furniture-paste composed of turpentine and beeswax the mixture caught fire and ignited the counter and other woodwork near. The fire spread with alarming rapidity,

but on the arrival of the brigade it was confined to the shop-fittings, and was got out before any serious damage was done. Mr. Faulds had a narrow escape.

CHEMISTS' ASSOCIATION.—Mr. R. M. Sumner has suddenly and unexpectedly resigned the treasurership of the association. Mr. Sumner, senior, was one of the founders and was third president of the society; he filled the office of treasurer for eighteen years, being succeeded by his son in 1881, since which time the latter has been unanimously re-elected each year, the last occasion being so recent as January. His withdrawal is much regretted. Mr. Richard Parkinson has accepted the office, and Mr. Conroy has been elected a vice-president to fill the vacancy thus created.

NEW CANDIDATE FOR THE COUNCIL.—Mr. Alfred C. Abraham has been nominated, and has expressed his willingness to serve on the Council of the Pharmaceutical Society if elected. Although within the last month Mr. Abraham stated publicly that he took little interest in pharmaceutical politics, he will no doubt soon inform himself on such matters. He is a man of ability and discrimination, and is not likely to follow any bold or indiscreet leader, or any faction or party (should such exist), without the exercise of his own independent judgment in the interests of pharmacy. Men possessing such qualities are wanted at Bloomsbury Square, and it is to be hoped that Mr. Abraham will be successful in his candidature. The late Mr. John Abraham (his father) was a member of the Council from 1866 to 1871.

MANCHESTER.

DRUGGISTS AS GUARDIANS.—Amongst those who have been nominated as guardians of the poor are several chemists and druggists, including Mr. C. G. Breadner, Cheetham, for the Prestwich Board; Mr. James Berry, Grosvenor House, Newtown, Flixton, for the Barton Board; and Mr. George W. Pratt, 44 Stretford Road, Hulme, and Mr. William Ramsden, 287 Wilmslow Road, Fallowfields, for the Chorlton Board.

SHEFFIELD.

SHEFFIELD PHARMACEUTICAL AND CHEMICAL SOCIETY.—The last meeting for the session was held on Wednesday, and was devoted to a paper by the President, Mr. E. Radley Learoyd, on "The Relation of Sheffield Pharmacy to Compulsory Education." It was chiefly remarkable by the absence of reference to Sheffield pharmacy, and resolved itself into a candid criticism of the action of the Pharmaceutical Society since its commencement; first was given the opinion that the great mistake had been made by the Pharmaceutical Society in not incorporating the whole body of British pharmacists at its foundation, then Mr. Learoyd proceeded to prick the other weak points of the organisation, yet arguing that the Society ought to be universally supported. "By being cosmopolitan in its sympathies" only could it raise the status of the pharmacist? Coming to the question of education, the essayist waxed eloquent in favour of compulsion, and urged that the objections of those who were of an opposite view were wide of the mark. He advocated the establishment of provincial and branch schools to further education, and of course these would have to be endowed by the Pharmaceutical Society. In regard to the position taken up by this journal, Mr. Learoyd made the discovery that it was not unbiassed because of the fact that we have a long list of subscribers, and the meeting was endeavouring to penetrate this thoughtful enunciation when the address finished in a poetic peroration which entranced them and induced a thunder of applause. A vote of thanks was moved by Mr. George Ellinor, who said that the defects of the Pharmacy Bill are due to its opponents and not to the Pharmaceutical Council. Mr. Ward seconded, and expressed the warmth of his love for the Pharmaceutical Society, and Mr. Newsholme, following, maintained that the Pharmaceutical Council had a well-defined policy of its own, which it had been and was consistently following out. He urged that all pharmacists should join the Society, and so by perfect unanimity attain greater results than had yet been accomplished. The next speaker, Mr. John Humphrey, threw in the first note of discord, by maintaining that compulsory education is bad in itself, and that all competent authorities

are agreed that the voluntary element was the most fruitful of practical results to the student. Nor did he care for endowments, and he saw no necessity for going a-begging for support to the local school, which he pointed out really originated amongst the students themselves. After some other speakers had expressed their feelings the discussion came to an end; and before the meeting adjourned the chairman asked everyone to do his best to get Mr. Newsholme returned again to the Pharmaceutical Council.

SWANSEA.

SEQUAH has been honouring the ex-capital of Wales with his presence during the last four weeks, and has shared with the "G.O.M." the hero-worship of "gallant little Wales," besides receiving something more tangible and enduring in the shape of 150*l.* or so a day, which is said to be a moderate estimate of his takings. His tooth-extracting, &c., being a cheap and, for the spectators, an amusing entertainment, had a considerable effect on the different places of amusement in the town, the proprietors of which would have been glad to have done half the business Sequah did. His prowess as a tooth-extractor (extracting sixty or seventy teeth at each entertainment) made him a formidable competitor to the dentists in the neighbourhood; but grinders are still probably decaying, and they can now resume their old practice at 5*s.* a tooth. Sequah's photo is on sale (by permission) at the principal photographers, and is constantly gazed upon by an admiring crowd, largely composed of young ladies, who are said to be quite "mashed" on him, and rumour hath it that he has received several offers of marriage; but the same statement has probably been made in other towns previously visited by the great "medicine-man." Three of the local chemists have been appointed agents, so that the inhabitants will not suffer the shock of being suddenly deprived of the inestimable advantages of the "Indian oil" and "prairie flower."

SCOTLAND.

ABERDEEN.

ABERDEEN UNIVERSITY—MEDICAL FACULTY.—The following young druggists figure in the pass-lists of the recent examination:—Mr. T. W. Ogilvie, first prizeman (90 per cent.), in anatomy; Mr. R. H. Marshall, second prizeman (90.2 per cent.), in chemistry; and Mr. James Broomhead takes a second-class certificate, with 69.3 per cent. Mr. H. P. Taylor has a first-class certificate (75 per cent.) in materia medica. Mr. T. W. Ogilvie is the only student who has passed at the recent examinations "with highest credit." We also observe the names of Mr. C. F. Fearnside and Mr. J. R. Levack, sons of two local chemists, amongst those who have distinguished themselves. Mr. Fearnside has taken his M.B., C.M., at this term.

THE SALE OF MEDICATED WINES.—In the local licensing court on Tuesday, Frank Crossling, 23 Thistle Street, manager of and for behoof of the London and Provincial Drug Store (Limited), applied for a grocer's certificate for the sale of wines, &c. Mr. Williamson Booth, solicitor, in support of the application said it was of an unusual nature; but that was no reason why it should not have come up. He wished to show that it was necessary for a druggist to have such a license. In January of this year the Excise authorities in England had successfully objected to chemists selling one of those medicinal wines which are being advertised to the public, and in the test case the person, Samuel Miller, Bradford, was convicted of selling these wines, and fined 20*s.*, with costs to the extent of 25*l.* This was why this application was made. This medicinal wine—"Pearson's Liebig's Beef Wine"—contained as much as 88.12 per cent. of a red wine, and that rendered a licence necessary. Bailie Kinghorn: Are you aware that if you got the licence the shop could not be opened on Sunday? Mr. Booth: My client is not aware of that. Mr. Yeats: He would be debarred. Mr. Booth: Well, if you cannot grant him the licence allowing him to keep open on Sunday, I must withdraw the application. Bailie Kinghorn: It is refused. Mr. Yeats: It is too late to withdraw it. Mr. Booth: I think I am entitled to withdraw it. Bailie Findlay: It is too late after you find the magistrates won't grant. Mr. Booth: I did so after I found you could not grant it without refusing the right to open on Sunday.

DUNDEE.

ENORMOUS CONSUMPTION OF BEECHAM'S PILLS.—These pills have always been a favourite in this district, especially with the working classes, but little idea of the enormous quantities consumed could be arrived at until the other day, when it became known that Messrs. Davidson & Gray have had no less an amount than 1,049½ worth invoiced to them from January 8 to March 30 this year. Of this quantity 719½ worth was sent between March 5 and 30. Messrs. Davidson & Gray have of late developed greatly their wholesale trade, and as they confine their operations to this district these figures may be taken to indicate the greater part of the local consumption of Beecham's pills. Mr. Thomas Beecham says in a recent letter:—"Such a demand as that experienced by me for Beecham's pills the last few weeks is unquestionably without parallel in the history of the patent-medicine trade. My employés and machinery are working at the highest pressure, and during the last two weeks I have dispatched nearly four tons of pills (net weight)."

EDINBURGH.

WILLIAM EDWARD, the apprentice druggist who has been detained on suspicion of having caused the death of a female domestic servant, Elizabeth Grieve, has been liberated.

At the medical preliminary examination in connection with the Royal College of Physicians and Surgeons last week (now conducted by the Educational Institute of Scotland), there were six ladies among the 174 candidates who were "up" for the examination.

THE PHARMACEUTICAL EXAMINATIONS come on next week at York Place, and will extend over the following week. There are two Majors entered, and over sixty Minors. The number of pharmaceutical aspirants seems to tend in an inverse ratio to the profit on drugs nowadays.

THE ROYAL BOTANIC GARDEN is now to be open to the public on Sundays. A beginning was made last Sunday, when 1,746 people visited the gardens between noon and 7 P.M., when the gates were closed, even although it was a miserable day of east wind and rain, such as Edinburgh alone can produce. During weekdays the garden will be open from dawn to dusk. Hitherto it was closed, even in summer, when much of the evening daylight was to come. To pharmaceutical students the change will be a distinct advantage. Previously the garden was only available to them before business hours; now it will in summer be open after shop-closing time. The change has been largely influenced by Professor Bayley Balfour, who has taken great interest in the matter. Although the Universities Bill has not yet been passed by Parliament, it appears that this transaction does not require Parliamentary sanction, having been completed between the Treasury and the Board of Works. The garden will be under the same Public Parks Regulations as the gardens at Kew. There is reason to suppose that under the new control the garden will be very efficiently conducted.

HYDRONAPHTHOL.—At a recent meeting of the Edinburgh Medico-chirurgical Society some interesting remarks were made regarding mercuric chloride and other antiseptics in the treatment of strumous glands. Dr. Sims Woodhead said that corrosive sublimate acted no less harmfully on the tissue elements than on the organisms; and it had been proved that it lost much of its parasiticide properties in presence of albumen. Professor Chiene agreed with Dr. Woodhead as to the uselessness of corrosive sublimate. He had the greatest faith in iodoform, but thought its virtue lay in so altering the character of the tissues as to lead to the production of a granulating surface, whereby secondary infection was prevented. He had great hopes that in hydronaphthol it would be found that they had a more perfect antiseptic. From experiments with hydronaphthol in relation to growing anthrax, it could be shown that that agent possessed more powerful parasiticide properties than corrosive sublimate, while it was less hurtful to the tissues. Dr. Edington, one of the University assistant professors, has lately been working in conjunction with Professor Chiene on the new antiseptic, and we understand that his results will shortly be published.

Pharmaceutical Society of Great Britain.

EVENING MEETINGS.

THE last London meeting of this session was held on Wednesday evening at 8 o'clock, Mr. Carteighe in the chair. About forty were present. There was only one paper, and this was contributed by Mr. R. H. Davies, Chemist to the Apothecaries' Society, the title being

THE IODINE ABSORPTION EQUIVALENTS OF ESSENTIAL OILS.

This subject was of considerable importance, as it related to an adaption of one of the most valuable methods for the examination of fixed oils to the testing of essential oils. In Hübl's iodine absorption process for fixed oils a standard solution is made by dissolving 25 grammes of iodine and 30 grammes of mercuric chloride each in half a litre of 95-per-cent. alcohol and mixing the solutions. About 0.4 gramme of the oil under examination is dissolved in 10 c.c. of chloroform, an excess of the iodine solution added, and after some time the unused iodine is determined with sodium hyposulphite. Mr. Davies told the meeting of the incidents which led him to take up the subject as apparently something quite new, but he learnt by-and-by that it had been worked on before by Mr. C. Barenthin, a German pharmacist, whose paper on the subject was published in the *Archiv der Pharmacie* in October, 1886. The process which he ultimately adopted was in all respects Barenthin's, with the exception of the standard solution, Barenthin's being twice as strong in iodine as Hübl's (which Mr. Davies used). The method employed was to dissolve a weighed quantity of the essential oil (0.4 gramme or less) in 10 c.c. of chloroform, adding an excess of the standard iodine solution (25 c.c. or more), allowing to stand all night, then adding 10 c.c. of 10-per-cent. potassium-iodide solution, 150 c.c. of water, and titrating with a standard hyposulphite solution. Mr. Davies showed the meeting how the iodine was absorbed, using lemon and peppermint oils for this purpose, as the amounts of iodine which these absorb are widely different. He then proceeded to read a long list of oils which he had experimented on, these being divided into four classes, according to the rate at which they had absorbed iodine in preliminary experiments. The value of this list was dependent upon another one, which gave the exact percentages obtained in more careful experiments; but, strange to say, this latter list, although the kernel of the matter, was neither read nor exhibited to the meeting, and our representative's overtures to get at it were not received with favour. The following facts are gathered from the subsequent part of the paper. After showing that the absorption by the same oils in different experiments was reasonably constant, the author pointed out that essential oils absorb much more iodine than fixed oils. Mitcham lavender oil was found to give the same figures as French lavender oil distilled at Mitcham. A sample of undoubtedly authentic oil of lemon gave 328.3 per cent. as the absorption figure; commercial oils gave from 340.3 to 355.1 per cent., which suggests adulteration. English and Japan peppermint oils absorbed 50 per cent.; American oil, 141.3 per cent. The chloroform solution in the case of the English and American is violet, passing through blue to green. This phenomenon is not afforded by the Japanese oil. The following are some of the results obtained by Barenthin compared with Mr. Davies's.*

	Barenthin	Davies
Turpentine	300 per cent.	307 per cent.
Cloves	270 "	360 "
Caraway	265 "	254 "
Bergamot	260 "	276 "
Juniper	245 "	230 "
Rosemary	185 "	225 "
Anise	164 "	189 "
Lavender	170 "	250 "
Calamus	155 "	181 "
Fennel	140 "	158 "
Cinnamon	110 "	189 "

* It will be noticed that Barenthin's figures are, with two exceptions, much lower than Mr. Davies's. This is in all probability due to the fact

Anethol, camphor, menthol, and thymol were experimented with by the same method, with the object of ascertaining if definite compounds of iodine and the organic bodies are formed, but the results so far are inconclusive. Referring to the estimation of essential oils in aromatic waters, Mr. Davies said that the process seemed to be applicable, but as far as he was aware, with the exception of a reference in Watts's dictionary, it had not been worked out.*

THE DISCUSSION

was not of great importance, and was chiefly made up of compliments to Mr. Davies. Mr. Blunt asked if the process could be turned to the determination of the composition of essential oils. Mr. Moss, after a jocular reference to Messrs. Schimmel & Co.'s criticism of him—which he passed off by saying that if England was not the centre of gravity for essential oils it was unquestionably the centre of trade—proceeded to say that the high figures with commercial oil of lemon suggested adulteration with turpentine. He suggested that the process might detect the presence of cedar-wood oil in oil of sandal wood. Mr. Walter Hills asked if oils after keeping for two or three years did not require more iodine. Mr. Holmes pointed out that the results showed that essential oils containing aldehydes or esters gave low percentages, while those containing terpenes absorbed large amounts of iodine, so that the process was apparently best adapted for the latter, and might be made useful for detecting turpentine in essential oils. Regarding the American peppermint oil, he said that adulteration with oils of copaiba and camphor oil was very largely practised in the States. As copaiba contained a terpene this would explain why the American peppermint oil absorbed more than double the iodine that English oil did. Mr. Davies, in the course of his reply, stated that he had not had time to determine with exactitude whether age influenced the absorption, but he thought it did not, for these reasons: Samples of oil of cubeb distilled by the same firm in different years gave these figures:—1885, 223.1 per cent.; 1888, 226.8 per cent., and 1889, 226 per cent. Oil of cloves: 1885, 366.6 per cent. (second quality, including stems); 355.1 per cent. (first quality); 1887, 362.5 per cent., and 1889, 349.5 per cent. On the whole he thought that keeping did not alter the iodine equivalent.

Mr. A. H. MASON said that in his paper Mr. Davies referred to a sample of oil of lemon three years old. Did he now maintain the statement regarding that oil, that its absorption equivalent did not alter with age?

Mr. DAVIES: I do.

The CHAIRMAN, in moving a vote of thanks to the author, made some mysterious remarks in regard to a process of this sort not satisfying business men, except they knew it would pay. He hoped it would not go forth that a three-year-old sample of essence of lemon was as good as when it was fresh. He then spoke at some length regarding Mr. Davies's career, and with many pretty compliments contrasted his present effort with the work done by one of his predecessors at the Apothecaries' Hall—Mr. Phillips, of the London Pharmacopœia fame.

EXHIBITS.

There were on the table a large cone of aluminium and some ingots of the metal. These were exhibited by Mr. D. W. Greenhow, who was called upon to say something about them. He thereupon made an interesting statement regarding the manufacture and uses of the metal; this bringing out several questions, amongst them one regarding the possibility of making evaporating-pans of aluminium, and to this Mr. Greenhow replied that, owing to the difficulty of working the metal, he had, so far, been unable to get aluminium pans for crystallising citric acid. Mr. Holmes then described the other specimens which were exhibited, including four fresh specimens of *Aconitum Napellus* and *A. paniculatum*, grown in his own garden. Some excellent crystals of aconitine and its salts (shown by Messrs. Richards and Rogers) were briefly referred to, as were also a number of rare essential oils from

Messrs. Schimmel's factory, and other materia medica specimens. After some remarks from the Chairman the meeting adjourned until October next.

THE fifth Edinburgh meeting was held on Tuesday evening at 36 York Place, Mr. William Gilmour, F.R.S.E., presiding. There was a very good attendance.

Mr. D. B. DOTT read the first paper, a

NOTE ON METHYL-ORANGE.

In this Mr. Dott showed that for pure dimethyl aniline-orange an inferior preparation is sometimes supplied, which is very deficient in delicacy as an indicator in alkalimetry. In the case of a solution of sodium carbonate which required only 13.3 c.c. standard acid to neutralise when genuine methyl-orange was used as indicator, 23 c.c. of acid were consumed when the defective methyl-orange was used; and even then the acid tint was not very decided, nor the end reaction very distinct. It was suggested that a sample which was not so bad as this, and therefore not so readily suspected, might lead to erroneous results in titration, whence it appears advisable to check the results obtained by one indicator with those obtained by another, in order to make sure that the indicator is all right.

Commenting on this note, Mr. Hill said he could corroborate Mr. Dott's observations, in so far as he had observed discordant results between this indicator and litmus. Dr. Inglis Clark said he had a strong partiality for litmus in preference to other indicators. Mr. Gibson had used methyl-orange, had found it unsatisfactory, and had given it up.

Mr. DOTT then read a paper on the

ACTION OF TARTARIC ACID ON MERCURIC CHLORIDE.

In the employment of mercuric chloride in dilute solution as an antiseptic the power which that salt possesses of regulating albumen has been found objectionable. There are several substances which greatly diminish this coagulating effect, and among these tartaric acid is perhaps most in favour. The object of Mr. Dott's note was to point out that if such a solution is kept for some days there is an appreciable reduction of the perchloride to calomel, so that the solution is just so much weakened as an antiseptic. It is probable that in course of time the reduction would be complete.

Mr. Arthur said that the addition of tartaric acid was suggested originally, if he remembered rightly, by an American surgeon. When it was first noticed, he had made some for a surgeon, who used it in an operation, but it blackened the wound so much that he had not used it again. In the light of Mr. Dott's communication the blackening might have been partly caused by the calomel, produced by the reducing action of the tartaric acid on the perchloride, being blackened by action of alkali in the blood. Mr. Lunan had found that in a weak solution a precipitate occurred. In a strong solution, with excess of tartaric acid, no precipitation took place. He did not think the precipitation of much consequence. The solution was generally prepared extemporaneously, was very cheap, and when used was immediately thrown away. Mr. William Duncan said he had found tartaric acid prevent the precipitation of mercury salts in the same way as it prevents the precipitation of iron salts. Mr. Nesbit had the impression that the coagulating property of mercuric chloride on albumen was one of its recommendations. In the course of being used it formed an inert compound, and in this way probably, prevented any poisonous results. He had not heard of any cases of poisoning by it, although it was very extensively used. Mr. Boa corroborated these observations. Mr. Arthur said he believed that Professor Lister's recommendation of it in surgical cases was based largely upon its power of coagulating albumen.

Mr. CHARLES ARTHUR then read a paper on

LIQUOR CALCIS SACCHARATUS.

Mr. ARTHUR said he had for some time been interested in the development of coloration in this liquor. Mr. Rutherford Hill had made a communication on the subject to an evening meeting some four years ago. So far as he was aware, that had been the only previous attempt to explain

that the former allowed the iodine to react with the oils during "three or four hours" only, while Mr. Davies gave them "all night."—Ed. C. & D.

* Mr. E. Dieterich has successfully used Barenthin's process for this purpose. See THE CHEMIST AND DRUGGIST, June 25, 1887, page 770.—Ed. C. & D.

the coloration. Mr. Hill had shown that the coloration resulted from oxidation, as exclusion of air prevented it. He had also suggested that the colour was due to the decomposition of the sugar with formation of apogluccic acid. After hearing Mr. Hill's paper he had tested a coloured sample of the liquor which he had by him, and found it to contain iron, and he formed the conviction that that was the cause of the coloration. At that time he did not go further into the matter. Recently, however, he had made a considerable number of experiments on the subject. He had found that all of a number of commercial samples of the liquor which had become coloured contained iron, although they were well up to the official standard in lime. It is pretty generally known that ordinary lime-shell contains varying quantities of iron and manganese. To determine the proportions of these, five samples of lime-shell were obtained from different sources and examined. The following is a tabular statement of the results:—

Sample	Ferric Oxide per cent.	Manganic Oxide
A	Absent	Absent
B	0.6	Trace
C	8.3	Very distinct
D	2.4	Trace
E	1.8	Distinct

Sample A was prepared from Carrara marble, and was pure white and entirely free from iron or manganese. He had placed on the table samples of liquor calcis saccharatus made from this lime. They had been exposed to air and light for months, and not a trace of colour had developed. Sample B was a good commercial sample, and was, he believed, Irish lime. It was soft and slaked easily. A liquor made from it was comparatively pale. Sample C was very dark in colour, as might be expected from the quantity of ferric oxide it contained. It slaked readily, however, and gave a brownish-yellow liquor. Sample D was reddish-brown, very hard, and slow to slake. A liquor made from it speedily coloured. Sample E contained about 7 per cent. of aluminous silicate. It was interesting to observe that many samples of lime-shell contain manganese. Mr. Shand had at a previous evening meeting drawn attention to the presence of manganese in chlorinated lime, and suggested that it might have been carried over mechanically from the chlorine generator. At the time Mr. Baker had indicated that manganese was a constituent in some limestones. The foregoing results would indicate that Mr. Baker's explanation of its presence is the correct one. From the samples of the liquor shown it would be seen that the depth of colour was in direct proportion to the percentage of iron, and that where iron is not, neither is there coloration. There was the question of how the iron got into solution. Ordinary lime-water made from, say, sample C contained no iron. The sugar, then, was indicated as the medium. The action would appear to be similar to that which occurs in the preparation of ferrum oxydatum saccharatum solubile of the German Pharmacopœia, which is prepared by precipitating a solution of ferric chloride with solution of soda in presence of sugar. In this way a yellowish-brown alkaline powder was obtained containing 3 per cent. of iron, of which 1 part was soluble in 20 parts of water, yielding a solution which deepened in colour on exposure to air and light. Mr. Arthur thought the iron passed into the colloidal condition in liquor calcis sacch., as it would not pass through a dialyser. It would appear that the only effectual means of preventing coloration in liquor calcis sacch. is to use a lime quite free from iron. The Pharmacopœia permits such impurities as iron and manganese. For lime-water they were not objectionable, but in the case of the saccharated solution they were undesirable, and the author was of opinion that lime free from iron should be ordered in the official formula.

Mr. Hill said that this paper, while corroborating his as regards oxidation, completely knocked over his theory of the coloration being due to formation of apogluccic acid. Iron and manganese seemed to go together in limestone. He agreed with Mr. Arthur that the iron in the saccharine solution was colloidal. Some experiments he had made confirmed this. Mr. Stephenson thought the paper they had heard conclusively disposed of the subject. Mr. Nesbit was

inclined to think there was an action between the lime and sugar. Messrs. Boa, Inglis Clark, and Gibson concurred in expressing their pleasure at the logical and conclusive way in which Mr. Arthur had treated the subject.

The same author followed with a paper on

GLYCERITES OF FERROUS SALTS.

Mr. ARTHUR remarked that liquid preparations of ferrous salts such as syrup of iodide of iron, had always been a source of trouble, owing to the facility with which they absorbed oxygen and changed the iron into the ferric state. Glycerine, as was well known, had the property of preventing oxidation of ferrous salts, and even of reducing ferric salts to the ferrous state. The sweetness of glycerine, too, renders it an admirable substitute for syrup. He had prepared several ferrous preparations with glycerine instead of sugar. Following the U.S. Pharmacopœia, he had designated them glycerites. The following is a working formula for

GLYCERITUM FERRI IODIDI.

Iron	1 oz.
Iodine	2 "
Water	3 fl. oz.
Glycerine	27 " or a sufficiency.

Mix 2 oz. of the water with an equal volume of glycerine in a flask; in this mixture digest the iodine and iron, heating slightly, and occasionally shaking until the froth becomes white; then filter the liquid into 26 fl. oz. of the glycerine; rinse out the flask and iron wire and wash the filter with the remaining ounce of water; mix, and make up to 31 fl. oz. Sp. gr. should be about 1.300. This glycerite contains 4.3 grains of ferrous iodide in a fluid drachm.

GLYCERITUM FERRI BROMIDI.

Iron	270 grains.
Bromine	540 "
Water	3 fl. oz.
Glycerine	26 "

Proceed in the same way as for glyceritum ferri iodid.; specific gravity 1.300. Each fluid drachm contains about 5 grains ferrous bromide.

The principle of using glycerine could be applied to liquid preparations of other ferrous salts, such as hypophosphite, phosphate, protochloride, or to mixtures containing any of these. He had some years ago prepared a substitute for Bland's pills by using a glycerite of ferrous sulphate and a syrup of potassic carbonate, 5 grains of each in the drachm. There was more trouble with it than the pills, and this was a disadvantage in practice. The glycerine preparations were all that could be desired in appearance and palatability. They had recently been extensively used both in the Edinburgh Royal Infirmary and in private practice. Drs. Carmichael, Jamieson, and Lockhart Gillespie had spoken highly of their efficiency and elegance. He might mention some points in favour of the glycerites in preference to syrups. Glycerine was not objectionable as a rule in cases where ferrous salts were used. Bromides and iodides were useful in diabetes, and it was obvious that a syrup could not be used in such a case. Some medical authorities were adverse to the use of sugar in strumous cases; there again the glycerine would be an advantage, not causing the acidity for producing which the sugar was objectionable. He would suggest that, instead of inverting a certain quantity of the sugar in the syrup by boiling, as was done in the now official formula, a small quantity of the syrup should be replaced by glycerine. He believed this would be quite as effective for preservative purposes as the inverted sugar, and would be less objectionable than the addition of hypophosphorous acid which was so generally used.

Mr. Stephenson thought the paper a very good and practical one. He had been familiar, however, with the same idea twenty years ago. He had never had any trouble in keeping the syrup of iodide of iron of the Pharmacopœia. The glycerine, however, might usefully replace syrup for such preparations. Dr. Inglis Clark said an analogous use for glycerine might be found in preserving ferrous carbonate. A small quantity kept it well in the form of a stiff paste. He had made glycerites of ferrous salts, and found them good. The Chairman said he was sure they all appreciated Mr.

Arthur's paper very much, and he hoped he would favour them again next session.

Mr. ARTHUR then described

A SIMPLE ARRANGEMENT FOR RAPID PERCOLATION.

The apparatus, which was shown in operation, consists of a York Glass Co.'s percolator, with a hole in the side of the receiver, to which an exhausting-syringe was attached by means of a piece of wide rubber-tubing. Mr. Arthur stated that he could get very good results by its use. Drugs could be used in very fine powder without fear of becoming so tightly packed as to retard unduly the percolation. An occasional pull at the syringe was all that was necessary to keep it going. The substance used for illustration was powdered ginger, and a considerable quantity of spirit was passed through in a very short time. Mr. Stephenson said the arrangement was so obviously convenient that comment was scarcely admissible. Dr. Inglis Clark did not use fine powders for percolation himself, and he never found need for exhausting the air from the receiver. The principle of percolation he believed was to get the menstruum to pass through the material at the same rate as through the spaces. The rapidity of the percolation in the arrangement shown was to him a fatal objection. It was not necessary, in his opinion, to pack drugs so finely as to require the receiver to be exhausted in order to get the menstruum through. He would suggest that loss of alcohol might be lessened in Mr. Arthur's contrivance by drawing the air through water. Mr. Arthur's arrangement was a very good one for the purpose. Mr. Arthur, in reply, said he did not agree with Dr. Clark as to the non-necessity of using fine powders. He found that in such cases as ipecacuanha and cinchona he got the best results by using fine powders, and with his percolating arrangement he got them rapidly.

The CHAIRMAN then read a

NOTE ON THE COLOURING MATTER IN GREEN EUONYMIN.

By William Gilmour, F.R.S.E.

This was intended to throw some light on the frequently recurring question of what was the colouring matter in green euonymin. The author had been of opinion that the colouring matter of the tincture shown by Mr. Thomson at last meeting was not chlorophyll, on account of the peculiar bright bluish-green colour it exhibited when abstracted by benzole. Those who had worked with chlorophyll knew that a solution of it taken from a fresh plant or a carefully dried one possessed a beautiful olive-green tint. The chemistry of chlorophyll was very incomplete, as was also the spectra of it produced by decomposing agents. Into these he did not propose to enter on the present occasion. He was of opinion, however, that anyone who took up the spectroscopic investigation would find much in literature that they would not find in the spectroscope, and he had no doubt they might find something in the latter that was not in the former. Mr. Thomson had supplied him with a series of chlorophyll tinctures prepared by himself from both fresh and old chlorophyll-yielding plants by extraction with ether and alcohol. He found that they did not all yield the same spectrum; a slight difference in preparation affected the result from the same plant. A very decided change was noticed in all the solutions which had been evaporated in a copper pan. After many experiments with solutions prepared both by himself and Mr. Thomson, he had found:—

(1) That the colouring matter of green euonymin was chlorophyll.

(2) That it was changed from ordinary chlorophyll to a bright green by the action of copper.

(3) That the spectrum was quite changed when the solution was boiled with copper, even for a minute or two.

(4) That no extractive medium, such as water, alcohol, ether, or benzole, had any influence on this action of the copper; and that no medium of which he could think, such as an acid, alkali, or oxidising agent, affected the spectrum in the same manner.

He had examined samples of green euonymin from different sources, and in every case got the same results. He exhibited two specimens in the spectroscope; by means of an external prism the one spectrum was superimposed above the other, and the two could be compared. One was unaltered, the

other acted upon by copper. The difference could be easily seen. The change was very slight, and the delicacy of the spectroscope was well exemplified. The unchanged read 80°20'; the changed 80°25'. In conclusion, Mr. Gilmour referred to a paper by Messrs. Paul and Kingzett read to the conference some years ago on the subject of copper in preserved peas. It occurred to him that the action of the copper on the chlorophyll explained the bright green colour of the peas. He accordingly got solutions from preserved peas free from copper, and digested them with pure copper, and the result was exactly the same as the spectra from chlorophyll digested with copper. Two specimens were shown—one quite clear, and the other the same solution digested with copper and quite green.

Mr. THOMSON described a number of experiments which he made in preparing the solutions for Mr. Gilmour, and in examining different samples of euonymin. He corroborated Mr. Gilmour in regard to the action of copper on chlorophyll.

The CHAIRMAN moved a vote of thanks to the readers of the papers.

Thereafter Mr. STEPHENSON asked the meeting to accord to Mr. Gilmour a hearty vote of thanks for his conduct in the chair during the session. This was the final meeting.

Mr. HILL announced donations to the museum of a specimen of "Uralium" from Messrs. Duncan, Flockhart & Co. This is a compound of chloral and urethane, used as a hypnotic, sparingly soluble in water. A specimen of *Lathraea squamaria* from Mr. Arthur was also exhibited. This had been obtained in Rosslyn Glen, and was somewhat rare.

PRELIMINARY EXAMINATION.

The following are the questions given on Tuesday, April 9, 1889. One hour and a half is allowed for each subject:—

LATIN.

I. For all candidates. Translate into Latin:—

1. The Romans gave the greatest honours to good citizens.
2. You will be loved by many.
3. Who doubts that Socrates was unjustly punished?
4. Tarquinius Superbus, the seventh king of the Romans, reigned twenty-four years.
5. The war being finished, the chiefs of the states came together.

II. Translate into English *either A. (Caesar) or B. (Virgil).*
(Candidates must not attempt both Authors.)

A. CAESAR.

1. Relinquatur una per Sequanos via, qua, Sequanis invititis, propter angustias ire non poterant. His quum sua sponte persuadere non possent, legatos ad Dumnorix Aeduum mittunt, ut eo deprecatore a Sequanis impetrarent. Dumnorix gratia et largitione apud Sequanos plurimum poterat, et Helvetiis erat amicus, quod ex ea civitate Orgetorigis filium in matrimonium duxerat; et, cupiditate regni adductus, novis rebus tudebat, et quam plurimas civitates suo sibi beneficio habere obstrictas volebat.
2. Ipse autem Ariovistus tantos sibi spiritus, tantam arrogantiam sumptu, ut ferendus non videretur. Quamobrem placuit ei, ut ad Ariovistum legatos mitteret, qui ab eo postularent, uti aliquem locum medium utriusque colloquio diceret: *ut ille sese de republica et summis utriusque rebus cum eo agere.* Ei legationi Ariovistus respondit: Si quid ipsa Caesaris opus esset, scire ad eum venturum fuisse; si quid ille se velit, illum ad se venire oportere.

Grammatical Questions.—For those only who take Caesar.

1. Give the nominative and genitive cases, singular and plural, of *sua sponte, ea civitate, novis rebus, plurimas civitates* (Par. 1).
2. Give the principal parts of the verbs in italics (Par. 2).
3. Parse fully the following words:—*angustias, possent, regni, adductus, sibi* (Par. 1).
4. What is meant by an *indirect question*? Give examples with verbs both in present and past time.

B. VIRGIL.

1. Id metuens, veterisque memor Saturnia belli,
Prima quod ad Trojam pro caris gesserat Argis—
Necdum etiam causae irarum saevique dolores
Exciderant animo. Manet alta mente repostum
Judicium Paridis, spretaeque injuria formae,
Et genu invisum, et rapti Ganymedis honores.

2. Talibus Ilioneus; cuncti simul ore fremebant
Dardanidae.
Tum brevis Dido, vultum demissa, profatur:
"Solrite corde metum, Teueri, secludite curas.
Res dura et regni novitas me talia cogunt
Moliri, et late fines custode tueri.
Quis genus Aeneadam, quis Troje nesciat urbem?
Virtutesque, virosque, et tanti incendia belli?
Non obtusa adeo gestans pectora Poeni;
Nec tam aversus equos Tyria Sol jungit ab urbe.

Grammatical Questions.—For those only who take Virgil.

1. Give the nominative and genitive cases, singular and plural, of *alta mente*, *genus invisum*, *rapti Ganymedis* (Par. 1).
2. Give the principal parts of the verbs in italics (Par. 2).
3. Parse fully the following words:—*brevis*, *nesciat*, *obtusa*, *aversus* (Par. 2).
4. What is meant by an *indirect question*? Give examples with verbs both in present and past time.

ARITHMETIC.

[The working of these questions, as well as the answers, must be written out in full.]

1. Find the value of 7 chests of tea, each weighing 2 cwt. 1 qr. 13 lbs., at 23*l*. 4*s*. 4*d*. per cwt.
2. A bankrupt owes to one creditor 500 guineas, to each of two others 250*l*., to each of three others 75*l*. His property is worth 625*l*. How much can he pay in the pound, and how much will the first creditor receive?
3. Add together $\frac{1}{3}$, $\frac{2}{5}$, $\frac{3}{7}$; and find what fraction the sum is of $\frac{4}{25}$.
4. Find the value of 2 8680*s* of 3*s*. + 8*s* of 4*s*. - 1*s* of 5*s*.
- *5. A boy walks 3 kilom. 654 m. in 42 minutes. Find his average pace per hour, (i.) in French measure, (ii.) in English measure.
- *6. If 6 horses in 4 days eat 144 kilog. 96 gr. of hay, how long will 675 kilog. 450 gr. serve 15 horses?
7. In a competitive examination, .07 of the candidates fail to qualify, $\frac{31}{100}$ of the remainder are unsuccessful, and 114 are elected. How many candidates at first presented themselves?

ENGLISH.

1. Analyse the following:—

"The people like a headlong torrent go,
And every dam they break or overflow;
But, unopposed, they either lose their force,
Or wind in volumes to their former course."

2. Parse fully:—

"To mortal men great loads allotted be;
But of all packs no pack like poverty."

3. Correct the following sentences, giving your reasons:—
(i.) He is not only noted for his singing, but his playing.
(ii.) You are not so tall as your brother.
(iii.) If I had only ran the last few yards instead of walked, I should have caught the train easy enough.

4. In the following passage supply the necessary capital letters, and put in the stops and inverted commas where necessary:—of all that have tried the selfish experiment let one come forth and say he has succeeded he that has made gold his idol has it satisfied him he that has toiled in the fields of ambition has been repaid he that has ransacked every theatre of sensual enjoyment is he content can any answer in the affirmative not one and when his conscience shall ask him and ask it will where are the hungry whom you gave meat the thirsty whom you gave drink the stranger whom you sheltered the naked whom you clothed the prisoner whom you visited the sick whom you ministered unto how will he feel when he must answer i have done none of these things i thought only for myself.

* At least one of these two questions must be attempted by every candidate.

5. Write a short composition on one of the following subjects:—

- (i.) The incidents of a day thoroughly enjoyed.
- (ii.) The effects of the invention of steam-engines.
- (iii.) Can persecution be defended?
- (iv.)

"How oft the sight of means to do ill deeds
Makes ill deeds done!"

Pharmaceutical Society of Ireland.

THE monthly meeting of the Council was held on Wednesday, April 3. Present:—The President, Mr. James E. Brunner, M.A., in the chair; Messrs. Grindley, Wells, Merrin, Baxter, McCormack, Beggs, Hayes, Allen, Hodgson, and Simpson.

Before the minutes were signed,

MR. GRINDLEY begged leave to point out a difference between the minutes and the reports of the proceedings of the last meeting of the Council which appeared in the *Pharmaceutical Journal* and *THE CHEMIST AND DRUGGIST*. It would be remembered that he not only spoke against the motion brought forward by Professor Titchborne, but also voted against it; but by some fatality his name was omitted from the reports in the journals as having voted against it, the numbers being inaccurately stated as 3 for and 8 against, instead of 3 for and 9 against.

THE PRESIDENT: I am much obliged to you for calling my attention to the fact. It escaped me when looking over the report.

The reporter said he inadvertently omitted the name of Mr. Grindley as having voted.

A letter was received from Mr. Joseph C. Irvine, of Castlederg, Tyrone, stating that, as he was unable to present the necessary certificate in practical chemistry, he would be unable to present himself at the examination for the Licence to be held that day. He therefore requested that a fee of 5*l*. 5*s*. which he had lodged in the Bank of Ireland might be refunded.

Agreed to.

MR. ALLEN remarked that candidates ought not to lodge certificates unless they covered the entire time required. It might be well if Mr. Ferrar were instructed not to receive insufficient certificates.

A letter was received from the Resident Medical Superintendent of Ennis District Lunatic Asylum acknowledging a letter of the Council of March 7 respecting the candidature of Mr. John Gilbert, L.P.S.I., for the office of apothecary in that institution.

Donations were received from the Pharmacy Board of Victoria of a copy of their report for 1888, and from the Pharmacy Board of Queensland of a copy of the Pharmaceutical List for Queensland.

On the motion of Mr. Hayes, seconded by Mr. Allen, thanks were voted to the donors.

A report was read from the committee appointed at the last meeting to consider the question of obtaining new premises for the Society.

THE PRESIDENT, in bringing up a report from the Certificates Committee, said it was suggested that in future the Registrar should retain all the certificates in practical pharmacy sent in by the candidates. Questions had arisen in some cases which made it desirable that all these certificates should be filed for future reference.

In regard to an account from the Pharmaceutical Society of Great Britain for copies of the *Pharmaceutical Journal* supplied to the members of the Society during the year 1888,

MR. HODGSON remarked that the Pharmaceutical Society of Great Britain had treated that Society most liberally, but he thought that anyone who wanted the journal should pay for it.

Some further matters having been disposed of the Council adjourned.

APRIL EXAMINATIONS.

The following were the successful candidates:—

Preliminary.

Canton, Wm. Fras., Mullingar
Carleton, Thomas, Dublin
Cleary, Daniel Jas., Limerick
Hogg, Geo. Alex., Belfast

Savage, Wm. John, Newry
Thomson, John David, Dublin
White, John Joseph, Skerries
Whitla, Robt. George, Monaghan

Eight were rejected.

Licence.

Connor, John Edgar, Newry
D'Arcy, Edward Michael, Dingle

Henry, Samuel R., Dublin
McClelland, John, Dublin

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

EXALGINE is the name of the latest candidate for medical favour as a pain-reliever. Drs. Dujardin-Beaumetz and Bardet have experimented with it, and found it in some respects preferable to antipyrin. To facilitate its use in prescriptions they have given it the shorter name just mentioned, as more manageable than its full chemical appellation, orthomethylacetanilide.

TO SEPARATE NICKEL FROM COBALT M. Carnot recommends to add hydrogen peroxide to the solution, and afterwards caustic potash. The nickel is thus completely precipitated, while cobalt remains in solution. But as the precipitate carries down at the same time a small proportion of cobalt, it requires further purification by repeating once or twice the same operation. Such is the substance of a paper read, on April 8, by M. Friedel before the Academy of Sciences.

AN ENGLISH PRIZE.—At the Academy of Sciences' sitting of April 8, Secretary Berthelot announced that an English gentleman named Parkens had bequeathed to the Academy 1,500*l.* for prizes to be awarded. One of the subjects proposed is, The effects of carbon compounds—carbonic acid, for instance—in cholera and like diseases. The other is, On the influence of volcanoes on diseases, on animals and vegetables. It was not clearly explained whether the whole sum, or its income only, is to be so employed.

CONGRESS OF CELESTIAL PHOTOGRAPHY.—By Ministerial order, issued on April 6, the following gentlemen have been appointed members of the organising committee:—Messrs. Common, member of the Royal Society, Davaone, vice-president of the Société de Photographie; Joseph and Paul Henry, astronomers at the Paris Observatory; Janssen, director of the Meudon Observatory, late president of the Academy of Sciences, &c.; Pector, secretary of the Photographic Congress organising committee; and Professor Wolf, of the Paris Observatory, and member of the Academy of Sciences.

NEW APPOINTMENTS AND ELECTIONS.—The following assessors have been appointed:—For the Paris superior school of pharmacy, M. Milne-Edwards, professor of medical zoology; Bordeaux Faculty of medicine and pharmacy, M. Blarez, professor of chemistry; Lille Faculty of medicine and pharmacy, Dr. Folet, professor of surgical clinics; Montpellier superior school of pharmacy, M. Soubeiran, professor of pharmacy; Lyons Faculty of medicine and pharmacy, Dr. Gayet, professor of ophthalmological clinics; Nancy superior school of pharmacy, M. Bleicher, professor of medical natural history. And finally the election has been confirmed of M. Diacon, professor of chemistry, as director of the Montpellier school, for three years beginning from the first of this month. An assessor is, in fact, a sub-director.

THEY THOUGHT THEY WERE POISONED.—Several deaths recently occurred among the journeymen vintners employed at Mas-de-Proch, in the Camargue plains, near Marseilles, and somehow public rumour attributed the casualties to the use of carbon bisulphide applied to the vine roots to destroy phylloxera. In vain did the owners of the vineyards try to persuade the hard-headed peasants that small quantities of

carbon bisulphide injected several feet underground could in no way affect men at work dressing the young shoots; a judicial inquest was demanded and obtained. The preliminary report made by Prof. Domergues, of Marseilles, has effectually stopped further prosecution, and allayed the fears of the good people, he having declared, after due autopsies, that deceased had died from the effects of the paludean fevers so common in the Camargue region.

ANGLO-AMERICAN MEDICAL ASSOCIATION.—The English-speaking physicians practising medicine in Germany, Belgium, Italy, Egypt, Switzerland, France, &c., propose to form an association, or rather to hold biennial meetings, under the name of "The Continental Anglo-American Medical Society." The gatherings are to take place in Paris every second year, and September 30, 1889, has been selected as the date of the first meeting. The following gentlemen have been selected honorary presidents:—Drs. Spenceur Wells, Lister, and Richard Quain, of England; Fordyce Baker, Weir Mitchell, and Billings, of America; and Ball and Brown-Sequard, of Paris. The organising committee is composed of the following physicians, practising in Paris:—Drs. Alan Herbert, Faure-Miller, Chapman, Dupuy, Barnard, and Thomas Linn, secretary.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

ARTHUR—HOLL.—On April 2, by licence, at the Chapel in the Field, Norwich, by the Rev. J. Perkins, John Arthur, chemist, Yarmouth, to Martha Henrietta (Pattie), daughter of Alfred S. Holl, Norwich.

JOHNSON—CHILVERS.—On April 4, at the parish church, Halesworth, by the Rev. A. R. Upcher, Mr. F. E. Johnson, chemist and druggist and photographer, to Miss Ellen Sarah (Nellie) Chilvers, third daughter of Mr. W. C. Chilvers.

DEATHS.

BARNETT.—On March 26, Mr. William Barnett, pharmaceutical chemist, St. James's Street, Brighton. Aged 70.

BENNETT.—On March 23, Mr. James Kirkman Bennett, chemist and druggist, Westhoughton, Lancs. Aged 71.

BURTON.—On February 23, Mr. Joseph Burton, chemist and druggist, Cambridge Road, London. Aged 68.

HARRINGTON.—On March 17, Mr. Allen Harrington, chemist and druggist, High Street, Needham Market. Aged 66.

HART.—On March 29, Mr. Thomas Hart, chemist and druggist, Painswick. For nearly fifty years Mr. Hart has carried on the only chemist's business in Painswick.

REEVES.—On March 11, at Everton, Mr. Alfred Reeves, M.P.S., of Stoke-on-Trent (dispenser to the Walton Union, Liverpool). Aged 34.

RIDLEY.—On March 27, Mr. Henry Ridley, chemist and druggist, Hoekley Hill, Birmingham. Aged 80.

SUTHERLAND.—On Friday, April 5, Mr. Daniel Dunbar Sutherland, chemist and druggist and aerated-water manufacturer, 55 High Street, Totnes. Aged 45.

SCHLICKUM.—Herr Oskar Schlickum, one of the most accomplished German pharmacists, died on April 4—the eve of his 51st birthday. Herr Schlickum was the son of Julius Schlickum, an apotheker of Winnigen, where he was born on April 5, 1838. He received the rudiments of his pharmaceutical training from his father, afterwards serving for some time with Thraen, the Court apotheker, in Neuwied, and as a military pharmacist. After passing the State examination at Bonn, he returned in 1866 to Winnigen to conduct his father's apotheker, and here he continued until his death last week. Herr Schlickum was a voluminous writer, and the author of several text-books, including commentaries on the German Pharmacopœia, and during the past ten years he undertook several researches of a practical character, the results of which have left their impress on our literature. The most noteworthy of these is a careful study of the properties and tests for Peru balsam, and observations on the assay of cinchona and opium.

Legal Reports.

ENO'S AND DUNN'S TRADE-MARKS.

ON Saturday Lords Justices Cotton, Lindley, and Fry, sitting in the Court of Appeal, heard the appeal of Mr. W. G. Dunn against the judgment of Mr. Justice Kay, dated January 31, and reported in THE CHEMIST AND DRUGGIST on February 2. Mr. Moulton, Q.C., and Mr. Birrell appeared for the appellants; the Attorney-General, Mr. Aston, Q.C., and Mr. Cutler appeared for the respondent.

Mr. Birrell (in the absence of Mr. Moulton), in his opening, said the application of Mr. Dunn was that, notwithstanding the opposition of Mr. Eno, he might be allowed to proceed with the registration of his trade-mark for baking powder. On December 7 Mr. Dunn sought to register as a label, "Dunn's fruit salt baking powder. The cook's best friend," and then there was an artistic design of a cook holding out on a tray some of Dunn's commodity.

Lord Justice Cotton: No, not some of Dunn's commodity, but rolls.

Mr. Birrell: That is, the result of what can be done by Dunn's commodity, not the commodity itself. Mr. Eno opposed the registration, and then the Comptroller referred the matter to the Court. When the application came before Mr. Justice Kay there was a second summons—a summons by Mr. Dunn to expunge Eno's trade-mark "Fruit Salt" from the register of trade-marks, on the ground that the words standing alone were not the proper subject-matter of a trade-mark. That had been registered as an old mark, under the provisions of the Act in use before 1875. That summons was no sooner opened than Mr. Aston said there was some difficulty in showing that the words "Fruit Salt" had been used before 1875 except in connection with the word "Eno," and he therefore, without argument, submitted to an order expunging that mark; and an order to that effect was made. Mr. Eno was also on the register in Class 42 for effervescing drinks of a non-intoxicating character—the words being "Eno's Fruit Salt," with an ornamental bordering consisting of a grape-vine, &c. Of course there was no application to expunge that mark, all that was wanted was to expunge "Fruit Salt" standing alone; and that was done, so that when the second summons came on Mr. Eno was no longer the registered proprietor of "Fruit Salt" standing alone. What Mr. Justice Kay then had done was that he had refused to register in connection with baking powder, a trade-mark of which the words "Fruit Salt" formed part, on the ground that it was calculated to deceive the public into the belief that they were buying something of which Eno's "Fruit Salt" formed a part. The learned counsel contended that that decision could not stand, because Mr. Eno not being the registered owner of "Fruit Salt," they being purely descriptive words, common to all her Majesty's subjects, Mr. Dunn was clearly entitled to register the words as part of his trade-mark in connection with something which could not possibly be identified with or mistaken for an effervescing draught. The learned counsel then put in and read Mr. Justice Kay's judgment.

Lord Justice Fry asked whether the Comptroller refused to register?

Mr. Birrell: No, he referred the matter to the Court. The learned counsel then referred to sections 72 and 73 of the Trade Marks Act. Section 72 provided the way in which the Court, when opposition was made to registration, should decide whether there was any likelihood of deception. The mode provided was that the two labels should be set side by side. Now applying this test: putting the two labels side by side, there could not be the slightest chance of anyone mistaking the one for the other. Then section 73 said: "It shall not be lawful to register as part of or in combination with a trade-mark, any words, the exclusive use of which would, by reason of their being calculated to deceive or otherwise, be deemed disentitled to protection in a Court of Justice." Now, subjected to either test Dunn's label did not come within either section. No one looking at the two labels could mistake the one for the other, and no one could discover such similarity as to entitle the Court, acting under section 73, to determine that there was such similarity as to

entitle the applicant to the protection of the Court. Mr. Dunn had disclaimed the exclusive use of the word "fruit salt" for baking powder, and there was nothing to deceive purchasers in regard to the similarity of ingredients, for Mr. Dunn said cream of tartar was the chief ingredient in baking powder. There was no similarity except in the sound of the words. The case was not one of design, as in the Golden Fleece mark, but a case of words, Mr. Eno having called his effervescing drink "fruit salt," and spent a great deal of money in advertising it; then Mr. Justice Kay had held that he was entitled to a monopoly of the trade-name, even as against something so dissimilar in its purposes as baking powder. Mr. Eno's case was that he had invented the word.

Lord Justice Fry: That it is a fancy word.

Mr. Birrell: Yes. He says in his affidavit that fruit salt has nothing to do with his preparation; but I do not see how he can contend that in the face of his label, which says that his preparation contains the saline properties of ripe fruit.

Mr. Moulton followed on the same side, and restricted himself mainly to the evidence in the Court below. Bitartrate of potassa was the principal ingredient of Dunn's baking powder, the ingredients of Eno's fruit salt being tartaric acid, carbonate of soda, sulphate of magnesia, Epsom salts, citric acid, and common salt.

The Attorney-General denied that "fruit salt" was a proper description of baking powder. It was not denied that there might be some acid in its composition. The other side were not right in saying that Mr. Eno came before the Court simply as one of the public in connection with the words "fruit salt," for he was the registered owner of the trade-mark, "Eno's Fruit Salt," and for many years had been identified with the sale of something popularly known to the public as "Fruit Salt." There was no objection to Eno's trade-mark, the only objection being that he could not register the words "fruit salt" *per se*. This was admitted, but the fact remained that Eno was the registered owner of a trade-mark of which the words "fruit salt" formed a most important part; and no one suggested that fruit salt had not acquired amongst the public a certain meaning.

Lord Justice Fry: That fruit salt has a distinctive meaning as apart from the salt of fruit.

The Attorney-General: Yes.

Lord Justice Fry: But I thought that fruit salt was salt derived from fruit.

The Attorney-General did not think it necessary to go into the meaning, and Mr. Eno said in his evidence that fruit salt was not an important ingredient. There were salts, he understood, in the effervescing draught, but no one suggested that "fruit salt" formed a part of the article. He submitted that the view of the 73rd section of the Trade Marks Act, 1875, submitted on behalf of the appellants, was a very narrow one; and it was certain from the judgment that Mr. Justice Kay did not believe Mr. Dunn's story that he adopted the name "fruit salt" from Brand's "Manual of Chemistry."

Mr. Moulton took exception to this statement.

The Attorney-General said the original justification was that the name was taken from a passage in Brand's "Manual of Chemistry," and Mr. Justice Kay did not believe the statement. The actual name "fruit salt" did not occur at all in Brand; and in the affidavits it would be found that fruit salt as such was not found in the British Pharmacopœia. It might be suggested that if they got an acid they might get a salt. He did not know how that was, but his submission was that no person had any right to put "fruit salt" in such a way as to induce the public to believe that the article so labelled was made of or from Eno's fruit salt. The defendant's disclaimer to an exclusive right to the use of "fruit salt" would be of no value, because the disclaimer would only appear on the register and would not appear on the labels. The question arose whether the use of a part of the words of Eno's registered mark was calculated to deceive. Mr. Eno was the registered proprietor of the label, and, independent of that, he had made the preparation for a great many years; and why should Mr. Justice Kay shut his eyes to the fact that Eno's fruit salt was an article which all the world had come to identify with Eno's preparation? Why did not Mr. Dunn put "bitartrate of potassa. Baking powder" on his label?

Mr. Moulton: The public would not understand it.

The Attorney-General: That is just it; and Mr. Justice

Kay took the view that, as the public would not understand it, Mr. Dunn adopted a name which they did understand, and which they had become accustomed to associate with the name of "Eno." He submitted that the decision of the Court below ought to be upheld and the appeal dismissed.

Mr. Moulton replied on the whole case.

Their Lordships, after a consultation, said they would deliver judgment on Tuesday.

Judgment was delivered on Tuesday, when their Lordships disagreed.

Lord Justice Cotton, in the course of his judgment, after stating the nature of the appeal, said Mr. Dunn had adopted the name "fruit salt" for his baking powder, and he said in his evidence that he discovered the name from something which he read in Brand's "Manual of Chemistry." No doubt he did find that he was using some salts which could be obtained from fruit. He had well known that Eno's fruit salt was sold in Canada, where he carried on business, but he said he adopted the name independently of that knowledge. But there was this remarkable fact—that neither in any chemical manual or dictionary nor in any trade experience was the term "fruit salt" used to designate the materials used in Eno's fruit salt. Mr. Dunn had persuaded himself, though he had not persuaded his Lordship, that what he saw in Brand's "Manual of Chemistry" suggested the name "fruit salt," for fruit salt was not commonly used by persons not acquainted with chemistry to designate things used by Eno, and by himself in his own baking powder. Mr. Justice Kay took this view, and held that these words were not descriptive in chemistry of those ingredients, although they (the ingredients) might be described as salts which could be extracted from fruit, and so they were fruit salts. What, then, under the circumstances ought to be done? The Court was not asked to grant an injunction to restrain Mr. Dunn from using his label on his baking powder, but the question was whether they should order the words "Dunn's Fruit Salt" to be registered as a trade-mark. He (his Lordship) was of opinion that it was the duty of those who had to attend to these matters to prevent, so far as they could, any intentional misleading or the passing off of goods as the goods of someone else. In his opinion, under section 73 of the Trade Marks Act, the Court ought to refuse to order a mark to be registered if it would be the probable result, or if it was the intention by registration to pass off goods as the goods of some one else. This case did not come so much under section 72, for if the two labels were taken together such differences would be seen as to induce the opinion that they were not calculated to mislead; and then again Dunn's goods were not sold for the same purpose as Eno's, although it was said in evidence that Eno's fruit salt could be used for the purpose of a baking powder. But section 73 proceeded on different grounds, and by its provisions, if the Court came to the conclusion that the proposed trade-mark was calculated to deceive the purchaser, they should do what they could to prevent such interference with the trade of others. This was what Mr. Justice Kay had done, who came to the conclusion that it was not only the intention, but the probable result, that the purchaser would imagine that Dunn's fruit salt baking powder was an adaptation of Eno's invention, and he (Lord Justice Cotton) thought that that would be the probable result. Eno had got the words "fruit salt," and they found that that had been adopted as the prominent catch-word in Dunn's label; and, though it was sold as a baking powder, it might induce people to believe that it was an adaptation of Eno's fruit salt mark, and so be calculated to deceive within the meaning of section 73. It was argued that, by upholding the judgment in the Court below, a monopoly would be given to Mr. Eno of two common English words, but his Lordship had no intention of doing anything of the kind. If Mr. Dunn liked to say that a part of the composition of his baking powder was salt which could be obtained from fruit, he was at liberty to do so. Eno had no right to monopolise the use of two English words, but he had a right to prevent persons from using the words in such a manner as to induce others to believe that they were an adaptation of his mark. In his opinion Mr. Justice Kay was right in his decision, and if the matter rested with him (Lord Justice Cotton) the appeal would be dismissed.

Lord Justice Lindley said in this case he took a different

view to that expressed by the Lord Justice with regard to the proper construction of the 73rd section of the Act. But first of all he desired to make a few observations on the words "fruit salt." As he understood the evidence the expression was traceable to Mr. Eno's ingenuity. It was not to be found in any chemical book or trade book until he adopted it. He had spent vast sums of money in advertising, and so fruit salt had become well known. It was, in fact, a very taking expression. One question raised was, What did it mean? Did it mean anything in particular? If it meant Eno's fruit salt, that was one thing; but, if it meant a salt prepared from fruit, that was another and very different thing. He did not think, however, that it had any definite meaning. It was a taking name, and he agreed with Lord Justice Cotton that it was because it was a taking name that Mr. Dunn adopted it. He also thought that Mr. Dunn was attempting to get the benefit of the name, though he did not think that he could get the benefit of Mr. Eno's trade. The things were entirely different. Dunn's baking powder was made of bitartrate of potassa and flour or rice-flour, and was not the delightful, cooling aperient advertised by Eno. No person buying baking powder would suppose that he was getting an aperient—the objects were so different that no one could attribute to Dunn's baking powder the qualities of Eno's delicious cooling mixture. Then, with regard to the proper construction of section 73 of the Act, 1875, his Lordship said he differed from the Lord Justice, who had already delivered judgment. The proper construction of that section had been discussed before, and he agreed with the late Master of the Rolls (Sir George Jessel) that where the labels were so dissimilar as not to be calculated to deceive, as contemplated by section 72, and where the uses to which the articles were to be put were so dissimilar that no one would purchase the one for the other, it could not be said that the mark sought to be registered was not entitled to protection. Without giving Dunn credit for selecting the name apart from Eno's adoption of it (for he clearly sought to get the benefit of the word, though not of the trade), he was not hit by either section 72 or section 73, so as to be disentitled to be registered. Eno had brought evidence to show that fruit salt was "Eno's Fruit Salt," but then he had already done what he had no right to do—he had procured himself to be registered years ago as the owner of the words "fruit salt," standing alone, and it was only when his right was challenged by Dunn that he submitted to have the mark expunged from the register. He felt there would be great danger if Mr. Eno were allowed to succeed, and the Court were to give him the exclusive right to use the words "fruit salt," to which he was not entitled. On these grounds he thought the appeal ought to succeed.

Lord Justice Fry said the only question which he proposed to discuss was whether Dunn's label was or was not calculated to deceive; and, in coming to a conclusion, he could not altogether discard the impression produced on his own mind. There was evidence that these words conveyed no meaning apart from Eno, but he could not entirely give up his judgment of the use of these words in favour of those who said that fruit salt produced no impression on their minds. Mr. Clayton, in his affidavit, said that long before he tested Eno's preparation he formed the conclusion that fruit salt contained the ingredients of fruit juice, and his Lordship confessed that the impression produced on his mind was similar to that produced on Mr. Clayton's. Eno's preparation was described as an aperient, effervescent draught, and had no connection with baking powder; and in his judgment no cook was likely to buy an aperient effervescent draught for baking purposes; nor was a person wanting an aperient likely to buy a baking powder. As articles of commerce they were entirely different things. Although he believed that Dunn was desirous of obtaining Eno's reputation for a popular compendious compound word, he was not suggesting anything that was false. He could not help regarding the attempt on Eno's part as an attempt to make private property a little strip of the great open common of the English language—a trespass which the Court ought to stop; and if that were not done grave consequences would follow. He concurred with Lord Justice Lindley that the appeal ought to succeed.

Mr. Aston asked their Lordships not to allow Mr. Dunn to proceed to registration until Mr. Eno had an opportunity of appealing.

Lords Justices Lindley and Fry held that no injury would be done to Mr. Eno even if Mr. Dunn placed his mark on the register before the House of Lords heard an appeal; and simply allowed the appeal with costs of the appeal, but no costs in the Court below.

THE DISPENSING OF POISONS.—MAGISTRATES' DECISION.

AT Torquay, on April 4, before Messrs. W. H. Halliday, L. B. Bowring, and E. Vivian, county magistrates, William Bathe, chemist, of Abbey Road, was summoned for having, on March 18, by his servant, William John Rawling, at his branch shop in Lower Union Street, supplied a quantity of syrup of chloral to Thomas Carter Tompkins, since deceased, without distinctly labelling the bottle "Poison," contrary to the statute. It will be remembered that Tompkins was a retired auctioneer, and that he committed suicide by taking an overdose of the chloral mixture bought by him at Mr. Bathe's branch shop.

William John Rawling, assistant to Mr. Bathe, stated that on the afternoon of the day named Tompkins came to him and asked for sixpennyworth of chloral. As chloral was not sold in this way he gave him a mixture consisting of an ounce of syrup of chloral (which contained 80 grains) and 7 oz. of water. He put this up in an 8-oz. graduated bottle and labelled it, "The mixture: the eighth part to be taken at bedtime." Tompkins took the bottle and left the shop. He came to witness the following day, and, on saying that he slept all right and felt better as the result of taking one dose, witness advised him not to take any more unless he required it. When Tompkins left he understood he would act upon this advice, but the next thing witness heard about him was that he had taken the whole of the other seven doses at once.

As the facts were not disputed, and the only question at issue was as to a point of law, the bench invited Mr. Bathe to make a statement on his own behalf.

Mr. Bathe said he considered there was no case, as stated in the summons, on the ground that syrup of chloral was not actually supplied, but simply a mixture or bottle of medicine containing that preparation. Therefore, it was exempt from the necessity of being labelled "Poison," as specially provided in clause 17 of the Pharmacy Act, another clause stating, "nor shall any of the provisions of this section apply to any medicine supplied by a legally qualified apothecary to his patient, nor apply to any article when forming part of the ingredients of any medicine dispensed by a person registered under this Act." His assistant was a fully registered chemist under the Pharmacy Act, and he had distinctly stated that he supplied the syrup of chloral in the form of a mixture, and, therefore, not in such a way as to render it amenable to the charge of not being labelled "Poison." In fact, he refused to supply chloral at all as such; but ultimately, in response to the continued solicitations of his customer, with whom he appeared to have been acquainted, he exercised considerable discretion in making up some medicine containing a few small doses of syrup of chloral, placing it in a bottle having the dose graduations marked upon it, and distinctly labelling it, "The mixture. An eighth part at bedtime." Hence he brought it under the clause exempting medicines containing scheduled poisons when so supplied. This was done with a perfect knowledge of the requirements of the Act, and with no idea of making an infraction of it. Those chemists to whom he had spoken on the subject expressed a unanimous opinion that no infringement of the Act had been committed. One chemist of repute, writing him in reference to the case, said, "You only did just what every dispensing chemist does every hour of the day—that is, supply a bottle of medicine containing a scheduled poison without labelling the bottle 'Poison'; and the law does not require a bottle of medicine containing poison to be so labelled. It would palpably be absurd to do so. In these cases it is needful, of course, that proper directions should be placed on the bottle, and, if then a patient chooses to take eight or ten doses at once, he, not the chemist, must take the responsibility and the consequences. Had you supplied chloral or syrup of chloral as such, without labelling 'Poison,' you would have been in the wrong, but not when supplied as a medicine, properly diluted. What more can a chemist do? To that extent, at any rate, you

appear to have done all that the law requires or that any reasonable person could expect."

The Chairman (Mr. Halliday) remarked that what the Act meant by a mixture was where there were ingredients one element of which counterbalanced another. In this case there was syrup of chloral with an addition of water. This was poison diluted—but diluted poison remained poison. It had not been shown to be medicine.

Mr. Bathe submitted that, the mixture having been prepared as it was, properly labelled as to doses, was exempt from being labelled "Poison."

The Chairman held that all poisons, whether diluted or not, should be labelled as such. Mr. Bathe's assistant sold that which, although diluted with water, was nevertheless a poison, and very unfortunate results had occurred.

Mr. Bowring: Poison is not nullified because it is diluted with water.

Mr. Bathe said poisons were often supplied in medicines in a diluted form. It was not necessary that it should be made up from a prescription if it was done by a fully qualified chemist.

The Chairman said the Act would be perfectly nullified if the general rule of labelling poisons was not observed.

Mr. Vivian observed that recently he had a gargle sent him marked "Poison," and he thought it would be better for chemists to err on the safe side.

The Chairman said the Bench were sorry to have to inflict a fine in this case, but they would be doing wrong if they did not do so. It was very little trouble, and much safer, for chemists to comply with the requirements of the Act, which was passed for the protection of the public. As the penalty was put at 5*l.* in the first instance and 10*l.* for the second offence, it was evident that it was contemplated to deal severely with those who infringed the Act. In the present instance the fine would be 1*l.*, including costs, and the magistrates hoped Mr. Bathe's assistant would be wiser another time.

A MINERAL-WATER CASE.

IN the Queen's Bench Division on Monday the case of Emanuel v. Vichy Company came before Mr. Baron Pollock and a jury. In this action the plaintiff, Mr. Emanuel Emanuel, a merchant in London, sued the defendants, La Compagnie Fermière de l'Etablissement Thermal de Vichy, represented in this country by Messrs. Ingram & Royle, for commission under a contract for the sale of mineral waters. The defendants denied liability.

Mr. Winch, Q.C., who appeared for the plaintiff, said the defendants, who were a French company, carried on business in England as mineral-water importers. In October, 1886, the plaintiff obtained from a Mr. De Bofill the concession of a mineral-water spring at Rubinat, in Spain, by the terms of which he was to have the exclusive monopoly for twenty years of the supply of the waters to England, the Colonies, and America. In December of the same year the plaintiff met the defendants' London manager, Mr. Norris, with whom two agreements were entered into in February, 1887, one agreement being between the plaintiff and the defendants, and the other between the defendants and Mr. De Bofill. The plaintiff gave up his concession, and the defendants, in consideration of his having introduced Mr. De Bofill to them, contracted to pay the plaintiff 10 centimes per bottle when the sale of the waters reached a minimum of 200,000 bottles. The defendants now alleged that Mr. Norris had no authority to make the agreements, but he (Mr. Winch) would submit that Norris had not only authority, but also that his acts were ratified by the defendants.

Mr. Finlay, Q.C., on behalf of the defendants, said he had a preliminary point to submit, which he thought would be adverse to the plaintiff's case. A great deal of evidence had been taken, and there were affidavits in French and Spanish. He had to submit that Mr. Norris had no authority to enter into these agreements, that Mr. De Bofill had no title to the spring, that the water from the spring was worthless and did not correspond with the analyses, and that the defendants had not sold a single bottle of it. There was no allegation that the defendants were to sell any number of bottles, and it was not asserted, as a matter of fact, that they had sold any at all.

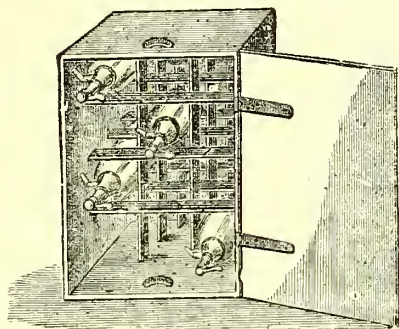
After some discussion his Lordship nonsuited the plaintiff, and reserved the question of costs pending an appeal.

Trade Notes.

WE are informed on good authority that a well-known drug-store in the South is about to open a branch at Clevedon, Somerset.

AN advertisement appears in this week's journal from the famous perfumer, Violet, of Paris. It will be noticed that several entirely new perfumes are announced.

WE have received a price-list of mineral-water tin cases, wine-cases, syphon-cases, and such like goods from Mr. John Owen, 37 and 38 Minorities, London, who makes a speciality of



this business. A well made and good-looking syphon-case has been sent at the same time for our inspection.

GLYCERINE SUPPOSITORIES, to take the place of the micro-injection of glycerine, are now being sought for, and it may interest the trade to know that a well-made article is being placed in the market by Mr. Paul Metz. Each suppository is wrapped in tinfoil, and the size is about 30 grains.

THE United Kingdom Tea Company (Limited), of 21 Mincing Lane, which is a company constituted some years ago by substantial and experienced tea-merchants, now offers agencies to chemists and druggists. The terms of appointment, which are before us, seem very reasonable, and the teas have a high repute.

THE Badische Anilin und Soda Fabrik has transferred its sale department from Stuttgart to Ludwigshafen-on-Rhine, where its principal works are situated. The Stuttgart factory, in which all kinds of paints are manufactured, has been sold to the firm of G. Siegle & Co., who will carry it on for their own account.

MESSRS. JOHNSON & JÖRGENSEN have removed from 54 Crutched Friars to 5 Savage Gardens, E.C., to which latter address the offices of the Magic Fire-lighter Company, which is brought out under their auspices, have also been transferred. Messrs. Johnson and Jørgensen state that a good many chemists, especially in the provinces, are pushing the sale of this new fire-lighter, which is sold in boxes of twelve at a very moderate price.

MESSRS. A. MINET & Co., pharmaciens-droguistes, of Port Louis, Mauritius, have taken into partnership M. Noël Cruve, who has been for many years engaged in their establishment. Messrs. Minet & Co. also send us their catalogue of drugs, chemicals, and sundries, which forms a very complete and well-got-up volume, and is a credit to their important and pushing firm. They are willing to represent good British manufacturers in Mauritius and the neighbouring islands.

THE shareholders of Daniel Judson & Son (Limited) have resolved to wind-up the company voluntarily, agreeing at the same time to a scheme of reconstruction.

COCHINEAL.—The cultivation of cochineal in the island of Teneriffe was commenced about sixty years ago, and in 1831 the first exports (about 19 lbs.) were made. The shipment rapidly increased until 1869, when the maximum quantity of 1,888,708 lbs. was exported. Since that time the cultivation has been on the wane, and the growing application of aniline dyes threatens to extinguish it in a few years.

Personalities.

MR. W. RANSFORD, chemist, Marine House, Clevedon Somerset, has disposed of his business to Mr. Orme.

MESSRS. FELLOWS & Co. have opened a high-class pharmacy at 44 Harrington Road, South Kensington, S.W.

MR. A. H. MASON, F.C.S. (Messrs. Seabury & Johnston), presided at the Chemists' Assistants' Association social on Thursday evening.

MR. P. KELLY, M.P.S.I., has been appointed lecturer on pharmacy at the Ledwich School of Surgery and Medicine, Peter Street, Dublin.

MR. H. E. STEVENSON, of Messrs. Fletcher, Fletcher & Stevenson, returned this week in the s.s. *Rome*, after a six months' tour in the Australian Colonies.

MR. A. J. WATSON has opened a branch establishment at The Mansions, Heath Street, Hampstead, which has been very prettily fitted up by Messrs. E. Natali.

MR. R. J. OPWYRDA, of Nymegen, Holland, will celebrate on May 1 the twenty-fifth anniversary of his editorship of the *Pharmaceutisch Weekblad voor Nederland*, the principal Dutch pharmaceutical journal.

MR. C. CHEVERTON, chemist, of Tunbridge Wells, has been re-elected on the local board of guardians; and Mr. W. Fox, chemist, of Westerham, has been similarly elected for the Sevenoaks Union.

MR. J. JARVIS RAMEY, Spilsby, who has been managing the business of his late father for trustees, has started in business for himself in another part of the town, the premises where the old business has been carried on having been sold to another party.

THE Pharmaceutical Council decided in private last week to elect John Burdon Sanderson, M.A., M.D., LL.D., F.R.S., professor of physiology, Oxford University, and William Crookes, F.R.S., past president of the Chemical Society, as honorary members at the meeting in May.

THE YORK GLASS COMPANY (LIMITED) obtained the consent of the High Court of Justice last Saturday to a reduction of capital by 169 shares, equal to 15,900*l*. These shares had been bought by the company out of their profits. Mr. Justice Chitty, having ascertained this, authorised the reduction. The last dividend paid by the company was 5½ per cent.

"The Medical Register" for 1889 (price 6*s*.) and "The Dentists' Register" for 1889 (price 3*s*. 4*d*.) have just been issued from the office of the General Medical Council, 299 Oxford Street, London. "The Medical Register" is one of the cheapest pieces of literature, accepting bulk as the standard, in existence. It contains 1,200 pages, and gives the names, addresses, and qualifications of 27,939 practitioners. It contains, besides, the text of all the Medical Acts. The number of registered practitioners now appearing is greater by 693 than in the previous year, and this seems to be about the normal rate of increase. But the new names added to the register in 1888 were only 1,184. In 1887 there were 1,531 new names added, and the average of the past five years has been 1,392. There are 4,890 dentists on the register, classified as follows: 3,833 are on the register on their own declaration, and without holding any other registrable qualification; 25 appear on their own declaration, but are also qualified surgeons; the English College of Surgeons contributes 451 licentiates in dental surgery, and the Irish College 429; the Edinburgh College of Surgeons' and the Glasgow Faculty of Physicians and Surgeons' dental certificates are the qualifications held in 142 cases, the numbers being 71 from each corporation. The remaining ten names are given as "foreign dentists," Harvard and Michigan being responsible for five each.

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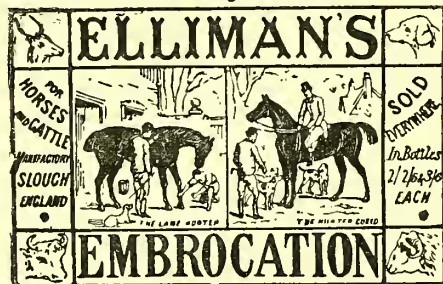
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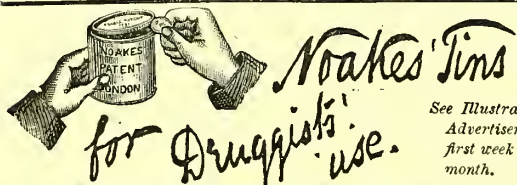
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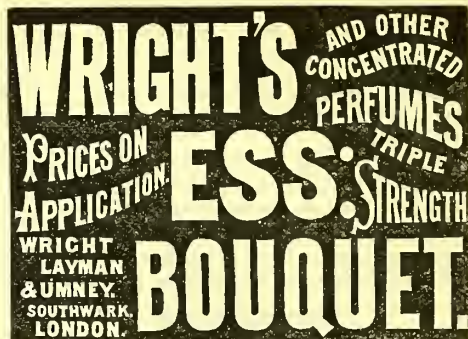
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Pages 17 and 18.

EDITORIAL NOTES.

SELLING AND DISPENSING.

A LEARNED magistrate at Torquay has kindly given us a
legal definition of a mixture. The Pharmacy Act, he says,
means a mixture "where there were ingredients, one element
of which counterbalanced another." Probably this is not
exactly what the magistrate said; something has to be
allowed for the reporter's misapprehension. The reference
was evidently to the distinction drawn in the Pharmacy Acts
between "selling" and "dispensing." The circumstances
under which the dictum was uttered were somewhat novel in
a law court, but represented a very ordinary transaction in a
chemist's shop. A customer went to a chemist for some
chloral hydrate; the chemist refused to supply it in its
native form, but ultimately sold or dispensed a mixture con-
taining 80 grains of chloral hydrate, 1 oz. of syrup, and
7 oz. of water. He put this in an 8-oz. graduated bottle and
labelled it, "The mixture: an eighth part to be taken at bed-
time." The customer took a proper dose the first night, but
the next night he swallowed the remaining 7 oz., evidently
with the intention of killing himself. The coroner who heard
these facts suggested a prosecution of the chemist for not
labelling the mixture "Poison," the jury supported the
coroner's view, the police obeyed their instructions, and the
chemist has been duly fined.

And the conviction, we think, was right, though we are
not quite sure about the reasons given for it. The Pharmacy
Act of 1868 made it unlawful to "sell" any scheduled poison
without fulfilling certain precautions about labelling, and, in
some cases, registering. But in the amending Act of 1869 it
was declared that "nothing contained in section 17 of the
said recited Act [Pharmacy Act, 1868] shall apply to any
medicine supplied by a legally qualified medical practitioner
to his patient, or dispensed by any person registered under the

said *Act*, provided such medicine be distinctly labelled with the name and address of the seller, and the ingredients thereof be entered with the name of the person to whom it is sold or delivered in a book to be kept by the seller for that purpose." Chloral hydrate is a scheduled poison, and the bottle containing any of it supplied to a customer should, according to the 1868 *Act*, be labelled with the name of the article, the word "Poison," and the name and address of the seller; and in that case "the seller" would be the proprietor of the business. The defendant at Torquay the other day contended, as we understand, that when his assistant put the chloral in the bottle, dissolved it, and added some syrup, he brought it under the exemption we have quoted from the 1869 *Act*. There is no indication, however, that the formula was copied, as required by the clause, and if that was not done the saving clause was evidently of no avail. That is why we say the conviction was correct. But the magistrates seemed to argue that the mixture so sold was not "dispensed" so as to come within the exempting provision. This is at least an open question, and it is one which has never been legally settled. The clause in the 1869 *Act* seems to be artfully worded. Probably the innocent legislators who agreed to it thought it applied only to the compounding of physicians' prescriptions, but on a close reading it is clear that it covers far wider ground. Any qualified chemist may "dispense" in this way without the intervention of a physician at all. But what is the exact distinction between selling and dispensing? The latter term, in general pharmaceutical parlance, applies almost specifically to the preparation of physicians' prescriptions. There is some reluctance among chemists to use it in reference to the compounding of what are known as family recipes. When the actions were being fought between the Apothecaries' Society and the Chemists' Trade Association the meaning of the word "dispense" was a good deal discussed. The dictionaries were not found of any assistance. The exempting clause in the Apothecaries *Act* preserved to chemists their right of "preparing, compounding, dispensing, and vending medicines." The counsel for the chemists in the cases tried endeavoured to extract some legal benefit from this multiplication of faculties. Dispensing, they said, was something other than preparing, compounding, or vending. Mr. McIntyre, in the Wiggins case, attempted to prove an old-established practice of "counter-dispensing," but his argument failed. Sir Henry James, in the Shepperly case, boldly maintained that the introduction of this term in the clause implied that chemists were to have some discretion in the selection of the medicines they supplied to their customers, and he supported his argument by referring to the meaning applied to the word "dispensary." A dispensary is a place where medicines are selected; that is dispensing; and as chemists are allowed to dispense, it is clear they may select medicines suitable for their customers. The argument proved too much. Dr. Whittle, in his "Elements of Pharmacy, Materia Medica, and Therapeutics," says rather neatly that the word "compounding" applies to the mixing, preparing, or blending of the drugs ordered in a prescription, while "dispensing" refers to the way they are put up, labelled, and sent to the patient. It can hardly be said, however, that this nicety in the use of the words is generally apprehended; but if the exact shade of meaning attached to the word "dispensing" had to be legally defined, we expect it would hinge a good deal on the way in which a medicine is put up and sent out. We are inclined to think, for example, that the chloral mixture in question was in legal form "dispensed," though we should not say that the mere solution of the chloral was the performance which took it out of the control of the 17th section of the 1868 *Act*. We do not profess to settle that point,

however; the important matter for chemists to remember is that when they "dispense" "poisons" in mixtures or compounds which they do not propose to label as such, they must be careful to copy the formula with the name and address of the purchaser in a book to be kept for that purpose—the prescription book, in fact.

THE WINTER'S WORK.

THE series of pharmaceutical evening meetings which are held in London and in the principal provincial towns during the winter months is now at an end, and we are in a position to estimate the results. It is noticeable at the outset that there are over a dozen associations and societies which show signs of vitality, viz. the Pharmaceutical Society, the associations in Birmingham, Manchester, Sheffield, and Liverpool; assistants' associations in London, Manchester, Liverpool, Glasgow, and Edinburgh, and senior associations in Leicester, Nottingham, and Aberdeen, which occasionally show by social and trade meetings that the chemists of these towns are still alive to the usefulness of combined action. Of the active associations the Liverpool and Glasgow assistants furnish the only new examples, and although they have begun work with much energy and enthusiasm it is yet too soon to judge of their future. The two series of meetings of the Pharmaceutical Society in the southern and northern capitals have between them contributed over thirty papers on subjects either purely pharmaceutical or nearly allied to pharmacy, Edinburgh taking the cake for the greater number. The London meetings have been fairly attended on the whole, but they have shown a decided falling off in general interest. Chemists in business do not attend the meetings in at all representative numbers, frequently less than a dozen showing in this way their interest in the progress of pharmacy. The reason for this, doubtless, lies in the fact that the papers as a rule have little in common with the everyday work of pharmacy. During the past winter, for example, at three of the five meetings the work of the research laboratory was the prominent feature, and it was all purely chemical. One of these, at which a series of investigations on the nitrites of the paraffin series was reported upon, deservedly brought a good audience, but still not a representation of master pharmacists to please those immediately concerned. The February meeting was certainly the best in general interest, and it is noteworthy that the contributors on this occasion were working pharmacists. How to maintain this element at these meetings is the problem that the Pharmaceutical Council has to solve. It is not creditable to this body that during the past winter not a single paper on a practical pharmacy subject has been read at the evening meetings. With its influence and organisation we should have thought it possible for the Council to have secured some attractiveness in this direction, and if hearty encouragement were given workers would doubtless come forward. The provinces show a better record in this respect, Edinburgh, Birmingham, and Liverpool notably proving the truth of our statement that the practical pharmacy subjects bring chemists together, and induce general and interesting discussions. The North British branch has had eighteen papers at its five meetings, and a dozen of these have been on galenic or dispensing subjects. At the Birmingham meetings some papers of general interest have been communicated, while at two meetings there were animated discussions on "Moot Points in Dispensing," arising mainly from observations in *THE CHEMIST AND DRUGGIST*. The Liverpool Association has the longest uninterrupted career of any independent association in England, so that a little falling off in interest might be excusable, but the past winter shows that it has

been fully alive to the topics of the day, and several practical papers have given evidence of its vitality. Sheffield chemists require to be stirred up a little; their society has met the regulation number of times, but the junior members have had most of the work to do. It is noteworthy, however, that this society has made a new departure in starting popular lectures. The Manchester Association does not take matters too seriously, but the members have been brought together on several occasions, and the papers have been of a practical character. The assistants' associations of the country are nowadays exerting a highly beneficial influence upon young pharmacists, and this, we may fairly assume, is materially aided by the publicity which is given to their proceedings. We are encouraged to give this publicity because of the character of the work done; as long as papers are mere compiled essays it cannot be expected that any journal whose space is valuable can give them prominence. Young writers have apparently found this out, and have shown during the past winter their ability to experiment in useful directions, and to record their results in an intelligible form. The Edinburgh Association has set an example in this direction which other provincial associations would do well to copy. In glancing over the work done, irrespective of its source, it is gratifying to us to find that questions of commercial and political policy which we have discussed have been taken up by the larger associations, and in no case have the lines of action which we have advocated been condemned. This is true especially regarding further legislation as to the sale of poisons, the inadequacy of the curriculum for trade requirements, and the Railway Rates Bill. In practical and technical matters a similar condition of things is also to be noted. We have now reached the gap which will only be broken by the meeting of the British Pharmaceutical Conference at Newcastle in September, and it would be useful for all associations to consider how they are to be kept from falling asleep during the summer. One keeps together by the attractions of the cricket field, and others by the mysteries of the vasculum. Both are useful in their way, and we should like if all provincial associations would endeavour to secure for masters and assistants an occasional free afternoon during the summer for mental and physical recreation.

CONCERNING BRITISH CUSTOMS DUTIES.

FROM the thirty-second annual report on the Customs, which has only recently been published, though it covers the year ending March 31, 1888, it appears that the gross receipts of Customs revenue for that period amounted to 19,791,335*l.*, which is about 3½ per cent. less than might have been expected from the preceding year's returns and the increase in population, though the reduction of the tobacco duty, which came into operation during the year under review, almost accounts for the difference.

It is a striking fact that in the United Kingdom, although its policy approaches nearer to Free Trade than any other country, and in spite of it being alone among all great Powers avowedly anti-Protectionist, more money is derived from Customs revenue than in any other country of the world, the United States alone excepted. Roughly speaking, we collected in 1886 almost as much Customs duty as did Russia, Germany, Sweden, Norway, and Denmark together, and more than the aggregate of Holland, Belgium, France, Switzerland, Spain, and Portugal. The reasons are, in the first place, that British trade is so very large; secondly, that while we tax only a very few classes of goods—twenty-one altogether, and twelve of these only because they contain

alcohol—we inflict a heavy duty where we ask for one; and thirdly, because the average Britisher consumes more food and drink and has more money to spend on luxuries than any other man and brother on the face of the earth. And yet we collect this enormous revenue very cheaply, the cost of the whole collecting machinery in 1887-88 having been only 931,829*l.*, or less than 5 per cent. of the returns of the department—a smaller figure, probably, than is required to gather the Customs revenue of many a Continental bureaucracy which collects less than we do.

Tobacco is by far the most productive of the articles upon which duty is levied, yielding not much less than one-half the total revenue. The increase from this item has been steady and uninterrupted from 1879, when it yielded 8,589,681*l.*, until 1887, when it brought in 9,469,488*l.* In 1888, however, the revenue receded by nearly three-quarters of a million, although more tobacco was actually imported, owing to the reduction of the duty by 4*d.* per lb. It is some slight indication of the growing comfort of the country that the revenue derived from the tax on what our Customs purists still call "segars" assumes a larger proportion year by year of the total collected on tobacco.

The importation of wine was larger than it has been since 1883, and though it would be premature to conclude from this fact that "plain living and high thinking are no more," or are doomed to extinction among us, it at least indicates that, materially speaking, we have not yet altogether started on the road to ruin. The duties on wines, as every chemist knows, were considerably altered in March, 1888, and as there had also been an "adjustment" in August, 1886, as a kind of *quid pro quo* to Spain for reducing her tariff on British goods, it is impossible to draw any conclusive inference from the figures represented in the Customs report to which we are alluding. But a comparison of the home consumption of wine in the periods between August 15, 1887, and March 31, 1888, with that of the corresponding periods of the two preceding financial years shows that while there has been some increase in the consumption of light French wines, this is small compared with the growth in the deliveries of Spanish and Portuguese vintages, especially of port wine, and of Spanish wines between 28 and 30 degrees of strength. At the same time, the importation of heavy wines, paying duty at the 2*s.* 6*d.* rate, is decreasing all round, because, so the report says, it now pays better to blend the wines after their importation into this country than it did before. The figures relating to the revenue derived from coffee are unsatisfactory. The consumption per head of the population, which was 0·98 lb. nine years ago, has declined to 0·80 lb. in 1887-88, and the Customs revenue from the same source has fallen from 212,002*l.* to 191,887*l.* One cause of this decline is not far to seek. French coffee is killing the coffee trade. "A luxury as enjoyed in Paris" is more than the British palate has been able to stand. Some mixtures of coffee and chicory sold by retailers in this country contain as much as 90 per cent. of chicory, and the proportionate yield of the Customs receipts from chicory to the revenue from coffee, which was 32·4 per cent. in 1879, had risen to 37·9 per cent. in 1888.

From the gloomy coffee we turn to the cheerful cocoa, and the still more exhilarating tea picture. The use of cocoa has grown in nine years from 0·30 to 0·45 lb. per head, and its yield to the Exchequer from 42,816*l.* to 70,953*l.* To the public cocoa rooms a large share of the credit of popularising the article is assigned. Cocoa, the Customs Commissioners say, is displacing the use of alcoholic drinks to a considerable extent. Supposing the last decade's rate of diminution in the Customs revenue from alcoholic beverages to be maintained, we find that the national income from that source in 1919 would be *nil*; but, on the other hand, it would not be

until 1875 that the tea and cocoa duties would make good the money loss thereby caused. Such speculative calculations are not, perhaps, of much practical value, as before the latter year Customs returns may have no longer a place in our annual history. Tea duties yielded a revenue of 4,613,395*l.* last year, that being the fifth successive year in which the return from that source has exceeded that of foreign spirits, and the excess is now so large that it may be looked upon as firmly established. The change in the importance of the sources from which we draw our tea supply is forcibly illustrated by the following figures, giving the percentage proportion from each country in 1876 and in 1887:—

—		China	British India	Ceylon	Holland (Java)	Other Countries
1876	per cent.	84 03	14 99	0 05	0 78	0 15
1887	.. „	53 17	31 15	5 89	0 32	2 47

Considering that Indian tea produces a much stronger liquor than Chinese, the growth of our Indian tea imports is all the more remarkable. We now consume 4.97 lbs. of tea annually per head of the population, against 4.90 lbs. in 1878-79.

As regards spirits, a very slightly larger revenue was collected in 1887-8 than in the preceding year, but with this insignificant exception the revenue derived from that quarter is falling away every year. In 1879-80 the return was 5,336,059*l.*, in 1887-8 it was only 4,225,627*l.*, while, had the consumption been kept up at the same rate as the increase of population, it would have been 6,125,219*l.* These figures apply to foreign-distilled spirits only, but the Excise returns show an almost equally large decrease in the duty from British-made spirits. The revenue from duties on dried fruit, such as currants, raisins, figs, plums, and prunes, is growing, though the three last-named articles are increasing in popularity more rapidly than either currants or raisins. With regard to other articles of smaller importance to commerce generally than the staples with which the Customs have to deal, but yet of particular concern to the drug trade, the report has little to say. Chloroform, chloral hydrate, acetic and sulphuric ethers, collodion, iodide of ethyl, and transparent soap prepared with alcohol, all pay duty when imported into this country, but they only yielded an aggregate of 1,268*l.* last year, of which 907*l.* was derived from chloral hydrate alone. Acetic ether was only made dutiable on June 10, 1887, between which date and March 31, 1888, 560 lbs. had been imported, paying duty at the rate of 1*s.* 9*d.* per lb., or 49*l.* altogether. A small but interesting table at the end of the report reveals a lamentable increase in smuggling. In 1879 the total number of seizures of smuggled goods was 1,482, in 1888 it was 2,860. In the former year 1,344, and in the latter 1,750 persons were convicted of smuggling, and the amount of fines recovered in 1888 was 3,568*l.* Tobacco is the tempter which mostly turns the unwary from the path of virtue, 2,477 seizures, or about 84 per cent. of the whole, having been made last year of the fragrant herb, resulting in the irrational destruction of 20,185 lbs. weight in the Queen's pipe; 467 gallons of foreign spirits were also seized and destroyed.

CHEVREUL.

FRANCE has lost one of her grand old men during the week, certainly the oldest of her grand men, if not the grandest of her old men. Michel-Eugène Chevreul, the celebrated chemist, and "the father of the French students" (*le doyen*

des étudiants de France), as he loved to be called, died on Tuesday morning, April 9, aged 102 years 7 months and 10 days. For some time past the old scientist has been so weak that his son's death, which occurred a week before, was concealed from his knowledge. On the previous Wednesday he took his daily ride to the Eiffel Tower, and noticed with almost childish glee the flag on the top announcing the work's completion. On returning home he felt so weak and faint that he had to be taken to bed, and medical aid was summoned. He lingered a few days, and at 1 A.M. on Tuesday peacefully expired, surrounded by his grandchildren and great grandchildren. During the forty-eight hours preceding his death the old man seemed unconscious, and scarcely spoke. On Tuesday morning he opened his eyes, and asked faintly, "*Où allons-nous ?*" Those suggestive words were the last uttered by the famous chemist.

The Government's intention is to give the illustrious scientist a national funeral, at a date not yet decided upon;



but the family desire the body to be buried, after the ceremonies, in the little cemetery at L'Hay, near Paris, by the side of Madame Chevreul, who died in 1862. They have also requested that, according to deceased's wishes, no speeches shall be delivered. They think that on the occasion of M. Chevreul's centenary celebration all had been said that could be said, and further speeches could be but needless repetitions. It must be acknowledged that the Chevreul family have shown much good sense. A grave in the L'Hay cemetery is a safer resting-place than the Pantheon, and enough was said about M. Chevreul's life when his centenary was celebrated in 1886. A full account of the proceedings was at the time printed in *THE CHEMIST AND DRUGGIST*. Yet it may be interesting to here briefly mention some of his scientific works in chronological order, as they are like the milestones of chemistry:—"Analysis of Guatemala Indigo," 1807; "On Wood, Logwood, Nitrous Derivatives of Indigo, &c.," 1808-13; "The Chemical Composition of Fatty Substances; their Decomposition into Glycerine and Fatty Acids, Saponification, &c.," 1813-18; "On Animal Tissues, Fibrin, Albumin, &c.," 1821; "Stearates, Oleates, Phocenes, Butyrates

Caproates, and the Corresponding Acids, Cholesterin, Ethal, Stearin, Olein, Butyrin, Nircine, &c.," 1823; "The Influence of a Successive Look at Two Different Colours," 1830; "Chemistry Applied to the Art of Dyeing," 1830-36; "On Prussian Blue and its Changes on Printed Muslins," 1837; "On Gastric Juice," 1850; "Definition and Name of Colours after a New Rational and Experimental Method," 1851. Many articles on agricultural chemistry, dyeing, and chemical analysis were also published from 1851 to 1888, but they are comparatively too recent to need recalling. The last paper read by M. Chevreul before the Academy of Sciences was on May 22, 1888, and was entitled, "The Part Played by Nitrogen in Vegetable Economy." On August 27 of last year he was elected with M. Frémy, another chemist, a committee to audit the treasurer's accounts; but three weeks later another committee had to be appointed in their place, and M. Chevreul was seen no more at the Academy. A coincidence perhaps worthy of notice is that Linnæus died in the same house of the Jardin des Plantes where Chevreul lived so long and breathed his last.

The Chemical Society.

The accounts presented to the Fellows of the Chemical Society at the annual meeting recently were of a very satisfactory character. The membership of the Society is on the increase, and consequently the income from subscriptions was last year about 250% more than the year before. In other respects the revenue showed an improvement upon the preceding year. The expenditure was a little more, mainly owing to increased cost of producing the journal and abstracts of proceedings; nevertheless, the treasurer was able to invest 500% in stocks, and he began this year with a larger bank balance than he had the year before. The Society, it may not be generally known, has a research fund amounting to 5,000% securely invested, and a bank balance of 404% 16s. 4d., which annually yield 175% 4s 11d. The only payment from this fund in 1888 was an honorarium of 20% to Dr. W. H. Perkin, the recipient of the Longstaff Medal. It is a pity to see so much money lying unused, especially when we recollect that the Chemical Society has been indebted during the past two years to the Pharmaceutical Society for papers which were the result of money grants made by the latter Society in aid of research. Moreover, on December 6 last one of the papers communicated to the Chemical Society was on "The Decomposition of Nitroethane by Alkalies," by Wyndham R. Dunstan and T. S. Dymond, the director and demonstrator of the Research Laboratory of the Pharmaceutical Society. We hope that the Council of that Society will see how anomalous procedure of this nature is, and that it will lose no time in applying for a portion of the annual and unused income of the Chemical Society's Research Fund. If there is refusal then it will be time to say that pharmaceutical money will no longer be spent on purely chemical researches.

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Explosives. Chlorate of potash is the most explosive substance with which chemists and druggists have to deal. By itself it seldom gives rise to serious accidents, but the violence of its character is occasionally shown, and that most frequently and disastrously in the case of coloured fireworks. We learn from the report of Her Majesty's Inspectors of Explosives that Dr. Dupré, the chemist to this department, last year had to investigate an accident in Pain's firework factory, arising from the explosion of coloured stars. The results are of interest as corroborating previous observations regarding the highly sensitive nature to percussion and friction of chlorate mixtures, particularly at slightly elevated temperatures. The chemicals employed in the manufacture of the stars were found to be chlorates of barium and potassium, nitrate of strontium, shellac, coal, and lamp black. Lamp black is liable to contain an appreciable quantity of free sulphuric acid, but there was none in this case. It was found, however, that one of the ingredients (Chertier's copper) of one of the stars was distinctly acid, and was the cause of the explosion. Chertier's copper

is a mixture of chlorate of potassium and sulphate of copper, which has been moistened with ammonia and dried. When freshly made it is alkaline, but in time it loses ammonia, becomes acid, and evolves chlorine compounds, owing to the decomposition of the chlorate of potassium by the sulphate of copper. In other words, Chertier's copper is liable to spontaneous decomposition, and the presence of such a substance in a combustible or explosive mixture cannot but be highly dangerous. It is marvellous how little is required to induce "spontaneous" decomposition in these explosives. Thus the paste used for making pillboxes becomes acid, owing to a change in the alum of the paste, and as no chlorate mixture should ever be brought into contact with materials that are either acid in themselves or are liable to become acid in the course of keeping, it is obvious that the spontaneous ignition of such mixtures kept in these boxes becomes merely a question of time and circumstances. These remarks apply more particularly to fireworks, but pharmacists will do well to keep the facts in mind when they are handling powders or other preparations containing chlorates.

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Cinchona in the Wynaad Districts.

Mr. Thomas Farr, a planter, of Bogawantalawa, in Ceylon, who recently returned *via* Tuticorin from a visit to the Nilgiris and the Wynaad, communicates some interesting information on the subject of cinchona-growing in these districts to a Ceylon contemporary. Mr. Farr has been very much impressed with the magnificent fields of cinchona to be seen growing vigorously in the Nilgiris. Staying on an estate situated alongside the Government garden, at Neddivattum. Mr. Farr was able to look over an expanse of upwards of six hundred acres of *Officinalis* seven years old, in which there literally was not a vacancy—a dark even sheet, in which canker was absolutely unknown, and in which the trees were really magnificent. Instead of finding everyone ready to throw a stone at cinchona cultivation and to regard it as useless labour, the planters in the Nilgiris appear quite content to wait until Ceylon shipments of bark shall have fallen to smaller limits before bringing the bulk of their produce on the market, as the bark from their own trees is generally of high analysis, and even at the present prices such cuttings as are from time to time necessary yield a return amply sufficient for current expenditure. Neddivattum and the gardens which surround it are at an altitude of over 6,000 feet, and few *Succirubras* are cultivated; but that which astonished the Ceylon planter more than anything else was the evenness of the fields of cinchona, for although the actual growth at the same age was generally not much better than in Ceylon, still, clearings of large expanse exhibit the same healthiness and vigour that are seen in Ceylon in patches only, and in trees in selected and sheltered spots amongst the coffee. Canker is absolutely unknown in the Nilgiris, and in all his journey he never saw such a thing, or even that flag of distress so often hung out by cinchona trees in Ceylon—a red leaf. The Nilgiri planters do not seem to have much fear of Java, but are still timorous of the enormous quantities which they fear may yet be shipped from Ceylon. They await with confidence the time when those shipments shall have dwindled to small proportions and the price of the article has again risen in the markets of the world. Much of the bark sent from Ceylon recently has been taken from dead or dying trees, whereas trees decay or die on the Nilgiris at all events only after they have reached their full maturity. The chief enemies of cinchona in that part of the world appear to be frost and sambur, the ravages of the latter particularly on young clearings being extensive.

AN American Pharmaceutical Society has been formed by some of the prominent druggists of New York, who have taken as their model the German Apothecaries' Society of New York. The real reason for this move is that for some time the New York College of Pharmacy has been in trouble, owing to race complications at the college, and it is badly in want of funds, which the New Yorkers do not feel inclined to give, except to a purely American institution. They decidedly object to Germans ruling the roost, and have adopted this method as the most expeditious for maintaining the integrity of American pharmacy.

BANKRUPTCY REPORTS.

Re GEORGE EDWARD INGER, Nottingham, formerly Chemist and Druggist.

THIS debtor came up for his public examination at the Leicester Bankruptcy Court on April 3, and in reply to the Official Receiver repeated the facts given in this journal last week.

Re EDWARD AUGUSTUS FRY, Sevenoaks, Chemist.

THE public examination of this debtor took place at the Tunbridge Wells Bankruptcy Court on April 4, before the Registrar, Mr. F. W. Stone. Mr. Wardley, solicitor, Tonbridge, appeared on his behalf. The particulars of this failure were reported last week in a report of the creditors' meeting. In reply to Dr. Muggeridge, a creditor, the bankrupt said he would swear that the money he procured from his father and father-in-law was borrowed money, and not free gifts. He had paid interest to his father, but not to his father-in-law. He had never betted or gambled in his life, but he had occasionally played billiards. The examination was closed subject to the signing of notes.

Re WALTER KERR WALLER, 62 Chapel Street, Penzance, Chemist and Druggist.

THIS debtor's public examination was held on April 6 at the Truro Bankruptcy Court, before Mr. Registrar Chilcott. Most of the details were given in this journal last week. The debtor, in reply to the Official Receiver, repeated these facts. He had the 1,000*l.* at 5 per cent. with which he started business in Penzance in 1887 from Mr. J. Macintosh, a former partner of his. At the time he borrowed this money he owed two sums of 1,500*l.* and 700*l.*, but did not know whether Mr. Macintosh was aware that he owed these sums. The 1,500*l.* was owing from November, 1884, and the 700*l.* from November, 1886. He borrowed 3,000*l.* from a gentleman, but gave him security for all but 1,800*l.* The large amount he had borrowed to pay his debts in Calcutta, as his health was failing, and he could not stay. He had paid no interest on the money borrowed. No demand had ever been made upon him for interest. He purchased the business at Penzance from Mr. Goodman. He entered into a written agreement with him, and was to pay 1,100*l.* for the business and also the furniture in the house. About the end of July, 1887, a lady came to live with him. After she came to his house to reside he sold some of his furniture, which realised 6*l.* 15*s.* This was the only sale he had in 1887. In 1888 he sold some furniture which realised about 25*l.* Nothing else had been removed from his house at Penzance. Some articles of silver which had been spoken of belonged to Mrs. Warwick, and not to him. In November, 1887, he borrowed 200*l.*, and a further sum of 30*l.* These monies he had devoted to his business at Penzance. In explaining his deficiency of 3,400*l.* the debtor said 3,200*l.* was gone before he took the business.

Mr. Goodman (a creditor) asked the debtor if he had not informed him in January that he (Mr. Goodman) was the largest creditor.

The Debtor: Yes, and so you were in the business. In reply to a further question on this subject the debtor said he had told Mr. Goodman he was the largest creditor, because the other creditors did not trouble him in the least.

Mr. Goodman thought it was a great shame that other liabilities should come into the business and cast a shadow over the business he had sold to the debtor.

The debtor was very sorry, just as sorry as Mr. Goodman.

Mr. Goodman: I am very glad to hear you say so, but that is poor recompense for those who are creditors. I can only say you ought not to have taken the business knowing how you were situated.

The Debtor: But, my dear sir, it was a matter of bread and cheese to me, and I tried all I could to keep it on.

Mr. Goodman: I think you ought to be thankful to those who pressed you and made you settle up, or you would have become more involved.

The Debtor: I am thankful—I am most heartily thankful.

In answer to Mr. Borlase, his solicitor, the debtor said pressure by Mr. Goodman was the real cause of his having to file his petition. The examination was closed.

Re JOHN PHILIP PHILLIPS, Staveley, Chemist and Druggist.

THIS debtor attended at the Chesterfield Bankruptcy Court on April 3, before Deputy-Judge Russell, to pass his public examination, with liabilities 480*l.* 13*s.* 9*d.*, and assets 480*l.* 6*s.* 4*d.* Mr. Stanton, solicitor, Chesterfield, represented the bankrupt, who, in answer to the questions of Mr. Hall, the Assistant Official Receiver, stated that he commenced business in November last on his own account, having been in partnership for eight years. He commenced with borrowed capital, having no other money. His partnership closed on September 9 last. He had to pay his partner 63*l.* He had paid him 60*l.* 1*s.* 3*d.*, which was his own money. The debtor's wife lent him 200*l.*, and with that he commenced business. He arranged to build premises in Staveley, and these were commenced in November last. The contract for building was 550*l.*, of which sum 200*l.* was now due. He was at the present time solvent, but he filed his petition because he was pressed by a writ from the contractor. The reason he filed his petition was because he was not then aware he could dispose of his premises, the lease for which was held as security by the bank. He was prepared to pay his creditors in full. Mr. Stanton asked for the examination to be closed. His Honour: It seems to be most satisfactory. The Chief Bailiff: It very rarely occurs here. His Honour: Or anywhere. The public examination was then closed.

Re LAURENCE ROBERT BARNES, Pctergate, York, Chemist and Druggist.

THIS debtor made an application at the York County Court on April 9 for an order for discharge. The Official Receiver reported that the liabilities to rank for dividend amount to 1,225*l.* 10*s.*, and the assets realised to date summed up to 510*l.* 14*s.* 2*d.* A first and final dividend of 5*s.* 10*d.* in the pound had been paid. Bankrupt did not appear to have committed any misdemeanour, but he had continued to trade after knowing himself to be insolvent. The debtor stated that his insolvency had been caused through a Mr. Frank Hunt, for whom he became surety. He discovered his liability on that account about twelve months before filing his petition, and since that time he must have traded with a knowledge of his insolvency. His Honour suspended the discharge for nine months.

Re WESLEY DARLEY, Meadow Lodge, Lea Bridge Road, lately managing director of the New Carbolic Sanitary Company (Limited), Manor Place, Hackney.

THE first meeting of the creditors under this failure was held on Wednesday at the London Bankruptcy Court, before Mr. H. Brougham, an Assistant Receiver. The bankrupt, who failed on March 12 last, has filed accounts showing a total indebtedness of 1,391*l.* 14*s.* 7*d.*, of which only 235*l.* 7*s.* 11*d.* is expected to rank against the estate; the assets are returned at 288*l.* 13*s.* 4*d.*, subject to realisation. It appears from the Official Receiver's observations that the bankrupt, when trading as a merchant and commission agent in 1877, filed a petition for liquidation, having then unsecured liabilities 1,588*l.*, and estimated assets 795*l.*, under which proceedings he does not appear to have obtained his discharge. He recommenced business the following year, without capital, as the "New Carbolic Sanitary Company," which, in 1882, was converted into a limited liability company, of which he was appointed managing director at a salary of 500*l.* a year, but the company went into liquidation in January last, and his services were dispensed with the following month. He states that his salary account with the company is complicated, but that in the event of its being agreed, as he believes it should, and of his residence realising its estimated value, he will be enabled to pay his creditors in full. He attributes his insolvency entirely to the failure of the company and the ceasing of his employment therewith, and to consequent questions of accounts between him and the company. Replying to the chairman, the bankrupt stated that the company would be able to pay 20*s.* in the pound,

and that he believed his claim for salary had been put down at 300*l.*, which no doubt would be paid to the court upon application being made for it. He was not in a position to submit any offer, but hoped sufficient would be realised to pay his debts in full. No resolutions were passed, and it was decided to leave the matter in the hands of the court for realisation.

Re CHARLES MARQUARDT, 11 Billiter Square, London, and at Calcutta (trading as Marquardt, Letzen & Co.), East India Merchant.

At the London Bankruptcy Court on Thursday an application was made by this bankrupt to Mr. Registrar Hazlitt for his order of discharge. It will be remembered that he failed in May last, principally owing to losses since 1886 on realisation of shipments of Indian produce, consisting principally of cotton, indigo, shellac, and hides, such losses being estimated at 20,000*l.* Mr. Howell represented the Official Receiver, and Mr. F. Cooper Willis supported the application on behalf of the bankrupt. It appeared from the Official Receiver's report that the bankrupt filed his own petition on May 11, 1888, and submitted accounts showing liabilities of 15,824*l.* 18*s.* 6*d.*, due to 177 creditors, and assets estimated to produce 8,211*l.* 13*s.* 10*d.*, after allowing for the preferential claims returned at 113*l.* 9*s.* 1*d.* Proofs of debt were made by creditors to the amount of 17,399*l.* 0*s.* 11*d.*; the assets had realised 9,188*l.* 2*s.* 8*d.*; a first dividend of 8*s.* in the pound had been declared, and a further dividend of 1*s.* in the pound will probably be paid to the creditors. The bankrupt in 1862 was admitted a member of the firm of Heilgers & Co, East India merchants, of London and Calcutta, and in May, 1884, retired from that firm and subsequently received his capital, amounting to about 30,000*l.* In October, 1884, he began business on his own account, and in July, 1886, having then about 28,000*l.* capital, he took in a partner to manage the business at Calcutta. This partnership was dissolved in May, 1887, the partner being then indebted to the firm in a sum of 1,000*l.*, but no proceedings were taken to recover the money by reason of the partner having been adjudicated bankrupt. After the dissolution the bankrupt continued upon his own account with a reduced capital of 11,000*l.*, retaining his late partner as manager at Calcutta. He attributed his failure to a loss of 20,000*l.* since 1886 on the realisation of Indian produce; to a loss of 3,612*l.* by bad debts; and to the expenses having exceeded the profits since January, 1888, owing to his having been partially incapacitated from business in consequence of illness. No offences were charged against the bankrupt, and, after hearing Mr. Willis in support of the application, the learned Registrar granted an immediate order of discharge.

Gazette.

PARTNERSHIPS DISSOLVED.

Arnott & Button, Rainham and Feuchurch Street Buildings, City, chemical manufacturers.

Roberts, Webster & Co, Liverpool, chemical merchants and dry-saltary dealers.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDERS.

Brewster, Robert, Cheltenham, dentist.

Moore, Abraham, Wednesbury, late of Bradley, chemist and druggist.

Norman, William Francis, Leamington and Milverton, chemist and druggist.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

Aspray, Thomas Neville, Eastbourne Terrace, Paddington, dentist—April 17, 33 Carey Street, Lincoln's Inn; May 1, 34 Lincoln's Inn Fields.

Banks, Benjamin, Folkestone, chemist and druggist—April 13, Bankruptcy Buildings, Lincoln's Inn; May 3, Guildhall, Canterbury.

Brewster, Robert, Cheltenham, dentist—April 13, County Court office Cheltenham; May 2, County Court, Cheltenham.

Norman, William Francis, Leamington and Milverton, chemist and druggist—April 16, Mr. Edward Thomas Peirson's, 17 Hertford Street, Coventry; April 17, Shire Hall, Warwick.

ADJUDICATION.

Brewster, Robert, Cheltenham, dentist.

NOTICES OF DIVIDENDS.

Allen, Joseph John William, England Lane, South Hampstead, chemist—composition of 3*s.* 4*d.* any day (except Saturday), Chief Official Receiver's office, 33 Carey Street, Lincoln's Inn.

Dards, Joseph, Old Kent Road and London Road, mineral-water manufacturer—first and final dividend of 1*s.* 11½*d.*, April 11 and two following days, 128 Newington Causeway, S.E.

Hackett, Harry Eugene, Gorton, also Manchester, surgeon—first and final dividend of 1*s.* 8½*d.*, April 8, Official Receiver's office, Manchester.

Humphreys, Matthew Henry, Pateley Bridge, chemist—first and final dividend of 3*s.*, April 24, Official Receiver's office, Middlesborough.

Hutchinson, Benjamin, Nottingham, mineral-water manufacturer—first and final dividend of 2*s.* 11½*d.*, April 15, Official Receiver's offices, Nottingham.

Irving, Charles, Long Bennington, surgeon—first and final dividend of 12*s.* 5*d.*, April 15, Official Receiver's offices, Nottingham.

Moorhouse, Edward Dobson, Hulme, Manchester, and Timperley, Cheshire, surgeon, first and final dividend of 5½*d.*, April 8, Official Receiver's offices, Manchester.

APPLICATION FOR DEBTOR'S DISCHARGE.

Slack, Joseph Isaac, St. John's Road, Hoxton, mineral-water manufacturer, May 7, High Court of Justice in Bankruptcy.

ORDER MADE ON APPLICATION FOR DISCHARGE.

Laing, William Alexander Gordon, Barnstaple, doctor of medicine—Discharge suspended for four calendar months.

AN IMPOSTOR.—Messrs. Savory and Moore write to the *Daily Telegraph* as follows:—"We shall be obliged if you will allow us, through your columns, to put the public on its guard against an impostor who is making use of our name to obtain admission to houses for the purpose, as it is believed, of theft. It has been reported to us from different quarters of the West-end, and also from the South of London, that he seeks an interview with the master or mistress, representing that he is sent by us on important business. When once he has obtained admission he makes an excuse by pretending to have something for sale or by asking for orders for some new thing we are about to bring out. In the cases reported to us within the last two or three days he has fortunately never been left by himself, as suspicion was naturally aroused at once, it being felt that the man could not possibly be authorised by us. So far as we know, hitherto no harm has resulted; but on communicating with the authorities of Scotland Yard it was thought advisable to issue this note of warning."

SULPHUR as a medicine is an old-established favourite, but has fallen somewhat into disuse of late years, so far as the medical profession is concerned. Recently Mr. Valentine Knaggs has on several occasions called attention to the use of precipitated sulphur in diphtheria as well as to its general effect upon the system, and now Sir Alfred B. Garrod, M.D., communicates to the *Lancet* a paper on "Some Chronic Diseases of the Alimentary Canal and Liver, also of the Skin and Articulations and their Treatment by the long-continued Exhibition of small doses of Sulphur given in the form of the Compound Sulphur Lozenge." The writer enters very fully into a consideration of the physiological and therapeutic effects, emphasising the importance of minute doses. It is nearly five years ago since he adopted the lozenge form for administration, each containing 5 grains of milk of sulphur and 1 grain of cream of tartar. To this lozenge he gave the name of the "Compound Sulphur Lozenge," and there are usually about twenty to the ounce avoirdupois. This lozenge is far from disagreeable, the cream of tartar giving it a pleasant, acidulous taste. Messrs. Meggeson & Co., of Miles Lane, E.C., send us a sample of the lozenges, which are all that Sir Alfred Garrod says of them.

LIVERPOOL CHEMISTS' ASSOCIATION.

DISCUSSION ON TRADE SUBJECTS.

THE fourth general meeting of this association was held on Thursday afternoon, April 11, at the Royal Institution. As several trade subjects were announced for discussion, the members of the drug trade of the district generally were invited, and the hour of the meeting was fixed at 3 p.m., in the belief that that would be found more convenient than the evening.

The chair was occupied by Mr. A. H. Samuel, F.C.S., president, and the attendance reached about twenty-five.

After the minutes of the previous meeting had been read and confirmed,

The PRESIDENT said they had been called together to consider several important topics. These were the proposed new Railway Rates and the Carriage of Drugs, the Sale of Medicated Wines by Chemists, and the Pharmacy Acts Amendment Bill. All these subjects were of the highest importance. The subject of the proposed

RAILWAY RATES

was set down for their consideration. This was a matter which touched their pockets to a considerable extent. All the companies had agreed as to classification, but not to rates for the various classes; but if they carried through their proposals the effect would be to materially increase the carriage on pharmaceutical chemicals and drugs, which had been put in Class 5, paying the highest rate.

Mr. JOHN EVANS (Messrs. Evans, Sons & Co.) at some length detailed particulars of the proposed rates. As compared with present rates, the carriage on every article which the druggist dealt in was to be raised, except tamarinds, which was of little importance. Drugs now carried from Liverpool to Manchester at 14s. 2d. per ton would be charged 24s. 7d. From London, the present rate of 50s. would be 74s. 4d.; to Leeds, goods now charged 25s. would be 38s. 2d. Goods under 560 lbs. weight, or smalls, would be charged nearly double present rates; empties were to be charged at the same high rate. The value of druggists' goods sent in hampers averaged 70s. per cwt. In the case of liquid ammonia, bottles, which were 40 per cent. of the weight, belonged properly to Class 1, or the lowest rate, but by the new scheme would be changed at the highest. Obviously this was unfair. Wholesale houses who paid carriage for their customers would have to get more for their goods; but retailers could not well do so, therefore this was a question which seriously affected the latter. Railway companies only considered their shareholders, who were capitalists, and not the trading community. He moved that a sub-committee should be formed to draw up a list of objections to the rates, and that these, when drafted, should be presented to the Board of Trade through the committee of the London Chamber of Commerce, which had been appointed to deal with this matter.

Mr. T. F. ABRAHAM seconded the motion, but thought too much alarm was being raised about this matter. Railways never had charged their maximum rates, and were not likely to do so. Competition might be relied on to prevent their doing so.

Mr. A. C. ABRAHAM thought the rates would certainly be higher, and also considered that there would be unfair terminal charges.

Mr. J. S. WARD thought competition might operate in large towns, but in small places maximum rates would be likely to be charged.

Mr. EVANS replied, and pointed out that objection-forms could be obtained for a nominal sum, and reminded the meeting that all objections must be presented to the Board of Trade by recognised bodies.

The motion was carried unanimously.

THE SALE OF MEDICATED WINES.

Mr. T. F. ABRAHAM, in introducing this subject, said medicated wines were being extensively prescribed by medical men, but that chemists ran serious risks in supplying their orders if they did not hold the necessary licence.

To obtain the licence a certain expense had to be incurred and there were obvious objections to the application for it on the part of chemists. He moved that a petition should be sent to the Inland Revenue authorities calling attention to the difficulty, and suggesting that an ad valorem stamp should be imposed in lieu of the licence duty.

Mr. A. C. ABRAHAM advocated that the Association should take joint action with other societies.

Mr. T. F. ABRAHAM, however, said he had no faith in the Pharmaceutical Society in such matters as this.

Mr. JOHN BAIN, honorary secretary, seconded the motion which was supported by Messrs. Mackinlay and Dickens. The latter said their progress would be very slow if they relied on the agency of the Pharmaceutical Society in matters of this kind.

Dr. SYMES thought the Inland Revenue authorities might be expected to give fair consideration to such a representation as was suggested, because a very unfair responsibility was thrown on chemists by the present system.

The motion was carried.

THE CURRICULUM BILL.

This was the last subject on the agenda paper. It was introduced by

Dr. SYMES, who said the Pharmacy Acts Amendment Bill (more commonly known as the Curriculum Bill), now awaiting a second reading in the House of Commons, aims to enable the Council of the Pharmaceutical Society to frame a curriculum, and to insist on a compulsory course of study at certain approved colleges or schools, for all students who shall in future aspire to enter our calling. From the little interest taken in this matter by the trade generally it is clearly regarded as a measure which affects future generations only, and about which men in business need not concern themselves. Even were that so, it was scarcely consistent with duty that they should be quite regardless of the future, or place themselves in the position of the Irish member of Parliament who said "he had heard a good deal about what we were to do for posterity; would some one be good enough to inform him what posterity had done for us?" He did not wish to be factious or to raise up opposition to anything which had a preponderance of good in it; but they should consider, as intelligent men, how this is likely to affect either their interests or those of any future generation. Sketching the history of the movement, the speaker referred to the criticisms of cramming for examinations which had been made by Professor Atfield and others, and said that some seven or eight years ago Mr. Schacht in particular, and the Council in general (himself included), became impressed with the idea that it was necessary to do something to assist the examiners in discriminating between crammed and well-trained men. A remedy had already been prepared, and only awaited adoption. That remedy was the curriculum. Cooked up with a little spice and swallowed whole, it was to prove a panacea for cramming and much more. It was to make the training of students more thorough, the knowledge they acquired more lasting. It was to benefit not only a school or *bonâ-fide* schools in London, but also those in the provinces. When these were languishing it was to be the refreshing shower and fertiliser which was to quicken them into vigorous growth. When in important centres they were absent, it was to be the germ from which they were to spring into existence. It was not only to confer educational advantages, but to raise up centres of social and intellectual intercourse throughout the country. And last, though not least, it was said in whispers and enigmas that by increasing the difficulties of entering the business we should reduce our numbers, diminish competition, increase our returns, and of course secure larger profits. All this was to be attained by a modification of the by-laws, but the Privy Council refused their approval, and the Society decided to go to Parliament for the necessary powers. It might be argued that what was worth attempting by means of by-laws must be so by Act of Parliament, and if we thought a curriculum desirable years ago it must be so still. But they had grown older, and it might be wiser, during that time. There are many more irons in the fire at Bloomsbury Square than there were seven years since, and the Society can no longer afford to carry out the scheme in its entirety, and denuded of its accompanying advantages it is but the mere ghost of its former self.

The late Dr. Greenhow said again and again that the only compulsory training necessary was that of apprenticeship, and the only modification of the examination required was to introduce more practical pharmacy into it. Dr. Symes confessed that at one time he regarded these views as rather heterodox, and he still believed that by good systematic training a bad man might be made into a good one, and a good one into a better, but he had come to the conclusion that the advantages of the curriculum alone as it now stands have been overrated by its most earnest advocates, and he doubted if it should be made compulsory unless equivalent advantages can be obtained. The legislation proposed was, in fact, one-sided, seeking to increase the difficulties of entrance into the field of pharmacy, but leaving large gaps in the hedges neglected and without effort to repair them. What is likely to result from such a condition of things? Our friends in the Dominion of Canada can supply the answer. The Ontario College of Pharmacy has a prosecuting committee, and in the last report of this committee it was stated that the efforts made to raise the standard of pharmacy had increased the number of evasions of the Act, and that unless the proposed amendments of the Act can be secured, instead of one drug store in seven, as at present, soon a large proportion of the drug stores will be nominally owned by doctors and run by unsuccessful candidates of the pharmaceutical examinations. In other words, the more difficult they made the entrance into pharmacy, without conserving the rights of those who practise it, the more does illicit trading increase. That is just what may be expected here. But was there no other method of preventing persons who have only acquired a superficial knowledge of their subjects from passing the examinations? Some two months ago the President of the Pharmaceutical Society stated that the proposed new syllabus of the examinations had been received from the examiners, and would at an early date be considered by the Council. As it had not yet been publicly discussed he could not say anything about it, except that if it was somewhat on the lines indicated by Dr. Greenhow, and requires from the candidate more practical pharmacy, it will accomplish all that can be obtained from the proposed curriculum, without its objectionable features. In conclusion, Dr. Symes moved:—"That in the opinion of this meeting it is undesirable that the Pharmacy Acts Amendment Bill, in the form in which it is now before Parliament, should become law."

Mr. J. S. WARD, in seconding the resolution, said he regarded the proposed curriculum as unnecessary to the student, unfair to men in business, and injurious to the Society itself. Chemists who have sons should remember they would have to pay more for training them; and whilst business grew worse and necessitated the reduction of the numbers entering the trade, this would have the effect of reducing the amounts which the Society would receive from examinations and subscriptions. The Society would, in fact, ultimately become bankrupt. Had not the unsatisfactory condition of the Society's school a few years since had some influence in bringing forward this question?

Mr. A. C. ABRAHAM thought a university training for students was calculated to do good. Was it not a question of the Society's sound teaching *versus* cramming schools?

Dr. SYMES, in replying, said the Society's school had improved without the curriculum. Every attempt to teach pharmacy to university students had proved unsatisfactory.

The resolution was carried.

"A LITTLE LEARNING IS A DANGEROUS THING."—The following information is gathered from an article "about varnishes" in a contemporary:—"The Chinese and the Japanese were the original users of varnish. Theirs was the natural product of a tree botanically known as the 'Anacardiaceae.' The sap exudes when that tree is tapped and forms a gum. This was dissolved in oils, and made the 'lacquer' used on Chinese and Japanese ware to this day. . . . The copal comes in the original packages. . . . After the dirt is cleaned off the copal's surface, the latter is found to be covered with small round dots. The cause of this is a matter over which scientific men have long puzzled themselves, but they have pretty much agreed that it is due to molecular action. . . . Varnish-makers have to bear the shortcomings of ignorance with resignation and meekness."

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., April 11.

THE week under review has not been remarkable for any violent change in any article of interest to our readers. No improvement, it is admitted, can be looked for in the drug and chemical branches on this side of Easter, and it is at least doubtful whether any decided bettering of trade in these branches will occur soon after the holidays.

Cinchona at the weekly auctions sold at some slight advance, and quinine is also dearer. As regards other chemicals, we find higher prices asked for cocaine, quicksilver and mercurials, sulphate of copper, and cream of tartar. In the drug department proper we note some improvement in castor oil, orris root, rhubarb, and calabar beans; and some falling off in insect flowers, ipecacuanha, and caraway seed. With reference to drysalteries we have to report an improvement in the markets for shellac, gambier, turmeric, certain classes of indigo, turpentine, ghatti, gum arabic, soda crystals, and Jamaica ginger. On the other hand, there have been declines in the value of cotton-seed, linseed, and rape oils, Bengal and Oude indigo, Aden sorts, and Australian gum arabic, caustic soda, and cloves.

CHEMICALS IN THE NORTH OF ENGLAND.—Our correspondent informs us that the markets, in all departments, have been exceedingly quiet this week, and that there are no alterations of any importance to record.

THE BOARD OF TRADE RETURNS for March show that our imports from foreign countries during that month have been worth 36,225,883*l.*, against 32,590,821*l.* in March 1888, an increase of over 11 per cent. Our total exports during the same period advanced from 24,301,810*l.* to 27,385,402*l.*, an increase of nearly 13 per cent. The result of the first quarter's trading of the year is now before us and may be called a very satisfactory one, notwithstanding that, as regards our exports, February was a somewhat disappointing month. The aggregate value of our imports from January 1 to March 31 may be set down at 106,500,000*l.* in 1889, as against 97,000,000*l.* in 1888. Our exports of British and Irish produce and manufactures during the same periods have been respectively 60,500,000*l.* against 56,500,000*l.*, and our re-exports of foreign and colonial produce at 17,000,000*l.* against 14,500,000*l.* We have made larger purchases from foreign nations in all classes of goods except metals, the collapse of the copper ring and consequent depression of the metal market accounting for this deficiency; and oils, principally on account of a falling off in our imports of olive-oil and petroleum. Chemical imports show a large increase in March and a slight one for the whole quarter, while raw goods for manufacturing purposes have improved by 11 per cent., and manufactured goods by 10 per cent. As regards British exports, the only decreases (and these are small ones) are under the heads of living animals and articles of food and drink. Raw materials, textiles, yarns, metals, machinery, chemicals, and sundries have all considerably increased. We have shipped 230,131*l.* worth of medicines in the first quarter of this year, against 227,134*l.* and 211,595*l.* respectively in the first quarters of 1888 and 1887.

NEWS comes from Libau, in Russia, giving a curious illustration of the manner in which the Russian Customs Laws are being applied. Some time ago the Danish steamer *Nishny Novgorod* arrived at the port of Libau with a cargo of 1,917 bales of cotton, but in the Customs declaration the captain, through a clerical error, returned his cargo as 19,917

bales instead of 1,917 bales. When the vessel had discharged, a discrepancy of 17,100 bales was discovered by the officials. According to Russian law every missing package of a cargo is considered as having been smuggled into the country, and subjected to a fine; and in this instance, therefore, in spite of the obvious nature of the error, the steamship agents, Messrs. Bornholdt & Co., were fined 200 roubles for each package alleged to be missing, or a total of 3,426,000 roubles, about 590,000*l.* After much trouble, and when it had been clearly proved that the discrepancy only arose through a clerical error, the fine was reduced to 312,000 roubles, or about 50,000*l.* The agents have now appealed directly to the Emperor.

ACIDS.—*Carbolic* is in good demand for crystals, and prices are keeping firm at 1*s.* 3½*d.* to 1*s.* 3¾*d.* for detached crystals 40°, and 1*s.* 2½*d.* to 1*s.* 2¾*d.* for ice crystals in bulk. *Citric* is dull at 1*s.* 4½*d.* per lb. for prompt, and 1*s.* 5*d.* per lb. for forward delivery. *Oxalic* quiet at 4½*d.* *Tartaric*: Prices remain very low, but there is some slight feeling that they have seen bottom; foreign is held at 1*s.* 2¾*d.*; English at 1*s.* 3*d.* to 1*s.* 3½*d.* per lb.

AMBERGRIS.—Our market appears quite clear of fine ambergris at the moment.

AMMONIA SALTS.—*Carbonate* quite neglected and dull at 3½*d.* per lb. *Sal ammoniac* is selling fairly well at 36*s.* for first, and 34*s.* per cwt. for second quality. *Sulphate* quiet, after having been very steady during the week, and closing at 11*l.* 12*s.* 6*d.* to 11*l.* 15*s.* for Beckton terms, 11*l.* 16*s.* 3*d.* to 11*l.* 17*s.* 6*d.* for 24 per cent. grey London, 11*l.* 16*s.* 3*d.* Hull and Leith.

ANISE.—Ordinary qualities are in full supply, and selling at low prices, but better parcels are somewhat sparingly offered.

ARSENIC is still firmly held at 13*s.* to 13*s.* 3*d.* per cwt. for best white powder.

BORAX.—There has been a rather firmer feeling, with better demand. The makers ask 30*s.* for both crystals and powder, but second-hand holders still sell at 28*s.* 6*d.* per cwt. In Italy *Boracic acid* is quite neglected, and prices, although still nominally maintained, are unmistakably tending lower. For crude in casks, not over 18 per cent. impurity, 23*s.* 6*d.* to 25*s.* f.o.b. Leghorn is demanded.

BLEACHING-POWDER steady and held at from 7*l.* 2*s.* 6*d.* to 7*l.* 7*s.* 6*d.* on the Tyne, and at 8*l.* 5*s.* in London.

CALABAR BEANS are again dearer, the arrivals from the Guinea Coast being insignificant. At auction in Liverpool 10½*d.* per lb. has been paid this week.

CAMPHOR.—In *Crude* on the spot there has been no business this week, so far as we can hear. Cables from Hong-Kong quote 88*s.* c.i.f. terms for Japan camphor by sailer. *Refined*, quiet, but steady at unchanged rates.

CARAWAY SEED still keeps on the decline, and holders appear anxious to unload, because they fear that the last season's seed will not keep much longer. New *Dutch* caraways are said to have sold as low as 19*s.* per cwt. *Russian* are held at 17*s.* to 18*s.* per cwt. Fine old seed is still comparatively high in price.

CASCARA SAGRADA.—On the spot we hear of no business, and prices remain nominally as last quoted. For forward delivery there appear to be offers in the market at lower rates.

CHAMOMILES.—Although reduced prices were accepted at the recent auctions, the importers do not seem to think that there is much cause to fear that the market will give way, and most of them continue to hold firmly.

CIVET.—Our stocks, it would seem, are no longer so plentiful as they were a few weeks ago, and though 7*s.* 6*d.* per oz. would probably still buy to-day, holders are suggesting a prospect of higher rates.

CINCHONA.—The auctions on Tuesday were of fair average extent as regards the quantity of bark offered, while the quality of the assortment was rather better on the whole than we have been accustomed to see at recent auctions, there being a fairly large number of lots averaging from

4 to 6 per cent. equivalent of quinine sulphate. The catalogues comprised:—

	Packages	Packages
	1,895 of which	1,496 were sold
Ceylon bark ..	497	412
East Indian bark ..	28	28
Java bark ..	276	187
South American bark ..	2,696	2,123

A better spirit pervaded the auctions, partly perhaps on account of the stronger tone of the quinine market, and partly also because no auctions will be held again until May 7. Nearly all the manufacturers present bought freely, and occasionally there was a fair amount of competition for a desirable parcel. The consensus of opinion at the close of the sales pointed to a slight improvement in the unit price, which may, we think, now be placed at fully 1½*d.* per lb.

The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the American, French, &c., works ..	104,861
" the Mannheim and Amsterdam works ..	96,456
" the Auerbach works ..	93,079
" the Brunswick works ..	83,997
" the Frankfort o/M. and Stuttgart works ..	76,151
Messrs. Howards & Sons ..	34,190
Mr. Thomas Whiffen ..	9,660
Sundry druggists ..	14,741
Total sold ..	510,133
Bought in or withdrawn ..	117,012
Total quantity catalogued ..	628,145

It may or may not be a matter of any importance in connection with American rumours of a quinine combination, but it is a fact that the agents for the American quinine factories bought a larger quantity of bark at this auction than they have done for several months past.

It should be well understood that the mere weight of bark purchased affords no guide whatever to the quinine yield represented by it, firms who buy a small quantity of bark by weight frequently taking the richest lots, and *vice versa*. An analysis of the catalogues gives the following prices for sound bark:—

CEYLON BARK.—*Original.*—Yellow varieties: Fair spoke shavings, 2½*d.* to 3½*d.*; good rich ditto mixed with chips, 4*d.* to 6*d.*; dull to fair small chips, 2*d.* to 4½*d.*; goods chips mixed with broken quill, 6*d.* to 7*d.*; fine root, 6½*d.* to 7½*d.*; druggists' quill, good bold and silvery mixed, 7½*d.* to 8½*d.* per lb. Red varieties: Ordinary dull chips, 1½*d.* to 2*d.*; ditto mixed with twigs and branch, 1½*d.* to 3*d.*; fair spoke shavings, 3*d.* to 4½*d.*; ordinary dusty to fair root, 2½*d.* to 3½*d.*; common broken and papery quill, 1½*d.* to 2½*d.*; good, partly silvery quill, 4*d.* to 5*d.* per lb. *Grey and hybrid varieties*: Fair to good chips, 3*d.* to 4½*d.*; good clean spoke shavings, 5*d.* to 5½*d.*; root, 4½*d.* to 7*d.* per lb. *Renewed.*—Yellow varieties: Ordinary to good stem chips, 3½*d.* to 7*d.*; chips and shavings mixed, 5½*d.* to 6½*d.*; good spoke shavings, 8½*d.* *Red varieties*: Ordinary to good stem chips, 2*d.* to 5*d.*; mixed chips and shavings, 4*d.* to 4½*d.*; good spoke shavings, 5½*d.* to 7*d.*; broken and thin quill, 3*d.* per lb. *Grey*: Dull, shavings, 3½*d.*; fair chips, 5*d.* per lb.

EAST INDIAN BARK.—*Original.*—Yellow varieties: Small to good branchy chips, 1½*d.* to 4*d.*; fair to good mixed chips and shavings, 4½*d.* to 6½*d.* *Red varieties*: Fair chips, 3½*d.*; small to good broken branch quill, 2*d.* to 3*d.*; fair bright spoke shavings, 3*d.* to 4*d.*; druggists' quill, ordinary papery and broken, 2*d.* to 3*d.*; thin to bold mixed silvery, 4*d.* to 5*d.* per lb. Fine grey chips, 5*d.* to 6*d.* *Renewed.*—Yellow branchy chips, 6½*d.*; grey chips and shavings, 7½*d.* to 8*d.* per lb.

JAVA BARK.—Ordinary ground hybrid, mixed with broken quill, 2½*d.* per lb.

SOUTH AMERICAN BARK.—Of 34,700 lbs. Bolivian *Calisaya* 24,320 lbs. were sold; good stout broken, but silvery, from the Yungas plantations, 9½*d.* to 10½*d.* per lb. (against 9*d.* to 9½*d.* per lb. at the previous auction); fair to dull broken quill, 7*d.* to 5½*d.* Two serons ordinary *Lima* quill sold cheaply at 1½*d.* per lb.

There was a rather large quantity of Ceylon and Indian root bark offered for sale, and disposed of at good prices. An offer of 9*d.* per lb. was refused for a parcel of renewed crown chips, said to be equal to 6-40 per cent. quinine

sulphate, and 11*d.* was declined for another parcel said to analyse 7.40 per cent.

The shipments of bark from Ceylon in the periods between October 1 and March 14 have been: 1888-89, 5,432,909 lbs.; 1887-88, 4,237,185 lbs.; 1886-87, 7,095,922 lbs.; 1885-86, 6,641,661 lbs. On March 13 the Colombo market was reported as absolutely lifeless, the article being almost unsaleable, even for the best qualities. The following figures are taken from the Board of Trade Returns for March:—

		March			First Quarter		
		1887	1888	1889	1887	1888	1889
Imports	.. cwt.	15,670	15,017	13,672	44,237	36,607	45,208
	.. value £	80,385	63,095	48,593	214,054	152,500	161,505
Exports	.. cwt.	17,416	9,977	13,174	39,797	30,006	34,276
	.. value £	71,673	29,016	29,997	170,573	88,829	84,269

COCAINE.—Higher prices are quoted for bulk, say, 14*s.* 6*d.* to 14*s.* 9*d.* per oz., and there are rumours that a portion of the recent coca crop has been packed in a damp state, and arrived at the ports of shipment almost valueless.

COPPER (SULPHATE).—Prices have slightly recovered, and close at 24*l.* to 25*l.* for spot, and 20*s.* less for forward delivery.

CORIANDER SEED dear, and in short supply. Prices run from about 11*s.* to 13*s.* 6*d.* per cwt., according to quality.

CREAM OF TARTAR.—There has been a decided improvement in the quotation this week, first crystals having advanced to 92*s.* 6*d.* or 93*s.* per cwt. on the spot, while seconds are held at 90*s.* per cwt. Quotations from the Continent are higher, and in most cases equivalent to 95*s.* per cwt. London terms.

CUBEBS.—We have received 27 cases *via* Singapore this week.

CUMIN SEED remains very dull and neglected, and *Malta* seed cannot be quoted higher than from 34*s.* downwards, while *East Indian* and *Mogadore* seed are correspondingly lower in price.

FENUGREEK SEED.—Our stock appears to be growing, and the demand does not seem quite so strong as it has been. Good *Mogadore* seed is held at 8*s.* 6*d.* to 8*s.* 9*d.*; *Egyptian* at about 6*s.* 6*d.* to 6*s.* 9*d.* per cwt.

GALLS.—There appears to have been a slightly better inquiry for blue *Turkey* galls at the recent reduction in price. Cablegrams from Shanghai quote 57*s.* c.i.f. terms, steamer shipment, for China galls this week.

GAMBIER.—At the close of last week the market became temporarily depressed, block offering at a reduction of 3*d.* per cwt. At the weekly dysrallery auctions, however, 673 bales sold "without reserve" at firm rates at 25*s.* 6*d.* to 26*s.* 3*d.* per cwt. Since then business has been done for arrival at 3*d.* advance, April-May up to 25*s.* 6*d.*; May-June, 25*s.* 3*d.* per cwt.

GENTIAN ROOT.—In Italy there is very little to be had at present, so the exporters say. They quote 16*s.* to 17*s.* per cwt. f.o.b.

GUARANA, which was reported very scarce and exceedingly firmly held some time ago, is again arriving from Brazil.

GUM ARABIC.—Holders of Trieste picked gum are again asking higher rates, up to 30*l.* for the best, and are not even anxious to sell at that. *Ghatti* has been in some request privately at firm rates, and at to-day's auctions some parcels realised 2*s.* to 3*s.* advance, buyers having come forward from the country; good white to very fine sold at 50*s.* 6*d.* to 82*s.* 6*d.*, ordinary dark to fair 23*s.* 6*d.* to 38*s.* 6*d.*. *East Indian Amrad* common dark to fair ambery drop, 35*s.* to 55*s.*; fine pale mixed soft, 90*s.* to 95*s.* per cwt. *Aden* sorts went 10*s.* lower, at ordinary dusty and drossy mixed, 45*s.* to 50*s.* *Australian* gum is also lower in price, common dark blocky to fair red drop, 21*s.* to 39*s.*. Fine *Cape* gum brings full prices, soft ambery sorts, 7*l.* 5*s.*; fine small palish, 5*l.* 10*s.*; ordinary glossy brown, 33*s.* to 37*s.* per cwt.

GUM BENJAMIN.—Two consignments, together 151 cases have been received this week from Penang.

INDIGO.—Rather heavy sales of East Indian indigo were held this week. At the commencement there was a fair demand and a good attendance of buyers. The sales lasted for four days, and of the 7,400 packages offered 3,700 were sold. The result of the auctions is that *Madras* has brought full rates, *Bengals* 2*d.* to 4*d.* lower, *Oudes* from par to 3*d.* lower. *Kurpah* indigo was very firm for the good qualities, but barely steady for the lower grades.

INSECT FLOWERS.—Prices are again quoted lower from Trieste, where holders have become shaky owing to the continued absence of the expected orders from the United States. Should the American orders arrive soon in anything like the accustomed extent, there is every prospect that the depression will only be temporary.

IPECACUANHA.—We hear that the holders are able to sell pretty freely on the basis of 7*s.* 6*d.* per lb. for fair annulated root, a reduction of only 6*d.* per lb. on the figure they quoted at the last auctions.

LEAD ACETATE is very quiet at 26*s.* for white foreign, but English sugar of lead is scarce, and in demand at 28*s.* to 29*s.*. Brown, 20*s.* to 22*s.* per cwt.

LINSEED.—There is a good demand for nearly all varieties, especially for the better grades. Best *Dutch* linseed is quoted at 46*s.* per 424 lbs.; *Russian* and *Turkish*, which are in very small supply indeed, at 42*s.* to 43*s.*. East Indian linseed not offering so liberally, and spot *Calcutta* has made an advance of 9*d.* to 1*s.* during the week, selling now at 40*s.* ex warehouse and 39*s.* 9*d.* ex ship per 410 lbs. *Bombay* spot, 40*s.* per 416 lbs. *La Plata* for prompt shipment, 37*s.* 6*d.* to 37*s.* 9*d.*

MAGNESIA.—*Carbonate* remains quiet at 40*s.* to 45*s.* per cwt. *Calcined* steady at 1*s.* 2*d.* to 1*s.* 4*d.* per lb. *Sulphate* is firm, and sells at 4*l.* 5*s.* per ton.

MERCURIALS have all been advanced 1*d.* per lb., in sympathy with quicksilver, the basis being now 3*s.* 3*d.* per lb. for *Calomel*

MORPHIA.—The makers still quote 4*s.* 9*d.* nominally, but for orders might take a little less.

MUSK.—Our stock has been increased by several cases since last week, and the supply which must now be in the warehouse will not improbably be large enough to bring down the price still further at the next auctions.

MUSTARD SEED.—There is a good demand for this article at present, supplies of all varieties being by no means over plentiful, the best grades of brown seed being, in fact, rather scarce. Brown seed is held up to 13*s.* for finest English, and from 7*s.* to 12*s.* per bushel for foreign seed. White seed 8*s.* to 12*s.*, according to quality.

OIL (CASTOR).—*Italian* and *French* oils are again firmer, and one of the principal Marseilles makers is reported sold out. *Calcutta* seconds have sold on the spot here at 3½*d.* per lb.

OIL (COCOA-NUT).—The market is slow, and there is a complete absence of transactions of any importance. *Ceylon* oil on the spot is held at 25*l.* 10*s.* for pipes, and 26*l.* for hogsheads; for April-June shipments, 23*l.* 5*s.* would be taken. *Cochin* oil on the spot is held at 27*l.* to 28*l.*. *Mauritius* nominal at 26*l.*

OIL (COD-LIVER).—The fishing, from the commencement until April 6, has yielded 9,000 casks of medicinal oil, against 15,500 casks at the corresponding date of the previous season. Various prices are quoted, but the "bear" party again appear to have gained the upper hand, and 80*s.* "c.i.f." terms per cask is asked for non-freezing oil.

OILS (ESSENTIAL).—Since the last auctions there has been further business in *Star anise* oil on the spot at 5*s.* 11*d.* per lb., but cables from Hong Kong ask higher rates, 6*s.* per lb. "c.i.f." steamer shipment. *Cassia* firmly held here, and 3*s.* 8*d.* per lb. asked. Hong Kong cables quote 3*s.* 2*d.* per lb. "c.i.f." Italian oils steady. *Lemon* in more demand on the basis of 4*s.* 6*d.* f.o.b. for standard brands. *Bergamot* also steady and inquired for at 7*s.* to 7*s.* 3*d.* f.o.b. *Orange* quiet at 4*s.* 4*d.* per lb. French oils without much change. The distilling of *Rosemary* is reported to be progressing satisfactorily, and

that of *Red Thyme* is about to commence now. *Otto of Rose* in good demand, but with quite enough stock to last until the new season. American oil of *Peppermint* dull, H.G.H., 13s. 3d. to 13s. 6d. per lb.

OIL (OLIVE).—Our market remains very quiet, the only business passing here being in *Mogadore* oil at 31l. 10s., *Spanish* oil nominal, at 34l. to 35l., and *Messina* at 34l. to 34l. 10s. The Liverpool market is also dull and neglected. In Northern Italy prices have an advancing tendency, the demand being very strong, especially for the best eating-oils. There are rumours that the coming crop will be deficient both in quality and in quantity, and on the strength of these reports speculators are said to be buying now.

OIL (PALM).—The demand has subsided, although fine *Lagos* oil is still nominally quoted at 25l. to 26l. Liverpool also quite neglected.

OILS (VARIOUS).—*Cotton-seed oil.*—On the spot the market remains quiet; crude, 22l. 10s.; refined, according to quality, 24l. 10s. to 25l. 10s. Hull easier; refined naked oil on the spot, 22l. 10s. to 22l. 12s. 6d.; crude, 21l. 2s. 6d. Liverpool refined scarce and firm at 24l. 10s. to 25l. *Linseed oil.*—London quiet and lower after the recent advance—spot, 18l. 15s.; landed, 18l. 15s. to 19l. Hull also lower; spot naked, 18l. 2s. 6d. Liverpool steady at 19l. 15s. to 20l. 5s. for export casks. *Petroleum oil* has advanced to 5½d. to 5¾d. on the spot for American; Sept.-Dec., 5½d. to 6¼d.; Russian oil, spot, 5d. to 5½d.; Sept.-Dec., 5½d. to 5¾d. The latter variety appears, judging by the business which is being done in it, to be becoming more popular every day. *Rape-seed oil* lower; brown spot, 26l. to 26l. 10s.; refined, 27l. 10s. to 28l. Refined Stettin oil in Liverpool also easier, and obtainable at 31l. 10s. to 32l. *Turpentine.*—American spirits dearer; spot 34s. 9d., May 34s., June 30s. 9d., Sept.-Dec. 28s. 3d. per cwt. French nominal.

OPIMUM.—Throughout the week the market has been exceedingly dull, but to-day a telegram has been received from Smyrna, which quotes 3d. per lb. advance there. It has not produced much effect upon our dealers.

ORRIS ROOT.—In Italy a good deal of speculative attention has been paid to this article recently, and according to the latest reports the stock of the best variety has all been concentrated into the hands of a few speculators who have bought it up at advancing rates, and who intend to raise the price still further. Finest *Florentine* in casks is quoted at 45s. to 47s.; medium to ordinary small and dark at 42s. to 34s.; *Verona* at 21s. 6d. to 26s. per cwt., f.o.b. Leghorn.

PATCHOULY LEAVES.—The first consignment of leaves (about 50 lbs.) grown in the West Indies (Dominica) has arrived this week.

PHOSPHORUS firmly held at 2s. 1d. per lb. for sticks, and 2s. per lb. for wedges. Amorphous phosphorous is selling at 3s. 1d. per lb.

POTASH SALTS.—*Bichromate* steady at 4½d. per lb. *Chlorate* in somewhat better demand at 4¾d. to 4¼d. per lb. on the spot. *Prussiate* quiet at 6¾d. for foreign and English yellow, and 1s. 7d. per lb. for red.

QUICKSILVER.—The following figures are taken from the Board of Trade Returns for March:—

		March			First Quarter		
		1837	1888	1839	1887	1888	1889
Imports	.. lbs.	313,500	1,038,299	494,367	1,741,835	2,703,113	1,679,234
"	.. value £	30,575	112,082	48,883	168,495	321,993	183,996
Exports	.. lbs.	31,113	180,786	581,447	1,051,544	452,529	1,254,433
"	.. value £	33,730	19,845	61,416	99,954	54,856	133,492

The London stock at the end of last month was calculated at about 50,000 bottles, against 64,000 bottles on March 31, 1838. There has been an important move upwards this week: Up to Wednesday the importers quoted 7l. 15s., and second-hand sold freely at 7l. 13s.; but on the day named the importers advanced their quotation to 8l. after having done a considerable business at the lower price. To-day they

are reported to have sold a further 1,000 bottles at 8l., and the market closes with some excitement, second-hand holders wanting 7l. 19s.

QUILLAYA is selling at 14l. to 14l. 10s. in Liverpool.

QUININE has been very firm this week, and prices on the spot have further hardened somewhat. Between 50,000 and 60,000 oz. German bulk are said to have been sold, mostly by the makers themselves, at 1s. 1½d. to 1s. 1¾d. on the spot; while some now require 1s. 2d. in that position. Early delivery sold at 1s. 2d. per oz. (1s. 2¼d. is now asked), and for distant delivery 1s. 2½d. per oz. is reported to have been paid. The *Fabbrica Lombarda* still quotes 1s. 1½d. per oz on the spot.

RAPE SEED.—Best *English* unaltered, but firm, at 60s. to 64s. per 424 lbs. *East Indian* dull, and slightly lower; brown Cawnpore, spot, 42s.; Ferozepore, 33s.; Guzerat, 43s. 6d.

RHUBARB.—The demand continues very good, and we hear of private transactions at a slight advance on the recent auction rates. The *Dardanus* has brought an arrival of 26 cases from Shanghai this week, the first arrival which has taken place for a long time.

SAFFRON is still very much inquired for, and prices are advancing. Fine to best *Valencia* from 58s. to 61s.; *Alicante*, 42s. 6d. per lb.

SHELLAC.—Although late on Friday last there was some momentary improvement in the market, the week opened very quietly with some slight business in second orange TN at 65s. for April delivery. At the auctions only 352 cases were brought forward, of which 200 sold at a reduction of fully 1s. on orange, and 2s. to 4s. on button lac. Garnet was not offered. The following prices were paid:—Fine but reddish SD in circle, 70s.; ordinary dull red to fair bright, 59s. to 64s.; ordinary first button, 81s.; fair seconds, 75s.; common to fine third, 61s. to 72s. per cwt. At the ring some improvement was manifested. Early on Wednesday a sudden demand set in, and during the day nearly 2,000 cases were sold at about 5s. advance, but at the close the market was again flat, with sellers at 1s. below the highest price of the day. To-day the market has been very dull indeed, and the quotations at the ring were as follows, no business whatever being transacted:—

Second Orange TN:—		April	May	June	July	Aug.
		s. d.	s. d.	s. d.	s. d.	s. d.
Sellers ..	..	70 0	71 0	71 6	71 6	73 0
Buyers ..	..	66 0	69 0	70 0	70 0	70 0

Garnet lac A.C. sold at 54s. 6d. on the spot to-day for a small parcel, but at the call there were no buyers over 54s., and this variety is quite nominal. In second orange there is a nominal advance of from 1s. to 3s. for the week.

SODA SALTS.—*Ash.*—Small orders at 1½d. per degree landed. Tyne, 1d. less 3 per cent. *Bicarbonate* 5l. 2s. 6d. *Crystals* dull and lower, 47s. ex ship here, 41s. on the Tync. *Caustic* firmer and in better demand; white 60 per cent. is especially scarce at 7l. landed; cream, 6l. 15s. *Nitrate*, ordinary to chemical quality, 9l. 10s. to 11l. per ton.

SPICES.—*Arrowroot* firm and in good demand at 2¾d. to 2¾d. for fair to good St. Vincent. *Chillies* were sold cheaper at Wednesday's auctions; Zanzibar, fair stalky, 28s. to 28s. 6d. per cwt. *Cassia lignea* dull and quite neglected; prices purely nominal. *Cinnamon.*—At auction 71 bales Ceylon sold at 7½d. to 8½d. for firsts, 7d. to 8d. for seconds, and 6½d. to 7d. for thirds. *Cinnamon chips* sold at 2½d. per lb. *Cloves* are in a very depressed condition, and Zanzibars could only be sold at lower rates, which holders do not yet care to accept. Only a few lots of common quality were disposed of at 6½d. per lb. *Ginger.*—Of 584 packages Cochin, mostly of the new crop, rather more than half was sold at full rates: cuttings, 12s.; small soft to medium rough, 15s. 6d. to 18s.; small to medium native cut, 22s. 6d. to 27s. 6d.; selected bold, 45s.; fair small to good bright medium, 32s. to 33s. Jamaica ginger dearer: small lean to medium bleached, 61s. to 70s. per cwt. *Mace* quiet but firm: fair to bright wild Bombay, 9d. to 9½d.; West Indian, 2s. 9d. to 3s. per lb. Privately there had been a good demand at the end of last week. *Nutmegs* have been in strong demand for some days previous to the auctions, with a considerable

business at higher rates. At the public auctions, however, the fair supply met little inquiry, and only a small proportion sold: Penang, 111's at 2s. 6d.; West Indian, 97's to 120's, 2s. 6d. to 2s. 3d. per lb. *Black pepper*.—Some business has been done privately throughout the week at 6¹³/₁₆d. to 6³/₄d. for Singapore, forward shipment. At the auctions nearly the whole supply was bought in, except 100 bags bright sifted Penang, which sold at 5³/₄d. per lb. Of *White pepper* about 450 bags were forced off at auction at ¹/₄d. to ³/₈d. per lb. decline; fair Singapore, 10³/₄d.; Siam, fair, 10³/₈d.; ordinary to good Penang, 9d. to 9¹/₄d. per lb. *Pimento* remains steady: medium grey to good clean bright, 3d. to 3¹/₄d. per lb.

TEA.—China market prices show very little alteration, except for commonest Shantam, which fell to 3³/₄d. in Tuesday's auctions. The market for good medium teas shows rather a firmer tone, and it is now impossible to match many of the so-called fine Soomooos which were "smashed" recently from 7d. to 8³/₄d. per lb. We have not yet, however, seen the end of the good first crop Oonfaas, a considerable number of which are still in importers' hands. New makes seem as if they cannot touch bottom, and a large quantity up for Tuesday last sold very irregularly. Assams are in smaller supply, and all good to fine teas have sold steadily, while low grades are firm, though not dearer. Pekoes from 9d. to 10d. are wanted at old rates, but few are offering. There was a heavy Ceylon sale on Tuesday, but prices were maintained for all good liquoring sorts.

TURMERIC.—At auction *Bengal* sold at an advance of 3d. per cwt., viz. 10s. to 10s. 3d. *Madras* firm: Fair slightly wormy fiver, 8s. 3d. to 8s. 6d.; fair bright bulhs, 7s. 6d. to 7s. 9d. per cwt. Privately 1,000 bags *Bengal*, June-July steamer, are reported sold at 10s. 3d. per cwt.

THE GERMAN MARKETS.

HAMBURG, April 9,

BUSINESS on the whole was rather quiet last week, though moderate activity has been displayed in some lines.

The prices in this column are given in marks (11³/₄d.) per 100 kilos. or per kilo (1 kilo. = 2 lb. 3¹/₂ oz., 50³/₄ kilos. = 1 cwt.).

ALOES.—*Curaçao* continue to arrive in quantity; 40m. would be accepted for a good quality.

BALSAMS.—*Copaiba*.—The demand is very brisk, and full prices are paid for new shipments of all varieties. Maracaibo is held at 5.75m. In *Peruvian* there is nothing doing here, and it may be quoted 7³/₄m. as the nearest price. *Tolu* very quiet; 2.95m. to 3m. is asked; small arrivals have come to hand.

BARKS.—*Cinchona*.—Porto Cabello remains scarce, and prices very firm; a small lot has been sold at 140m. Two parcels of the flat Calisaya, ex *Ramses*, brought full prices. For *Condurango* a good demand has prevailed, and prices are held at 1.50m. *Quillaya* bark is firmer, some 80 tons having changed hands; 32m. is now quoted.

CALUMBA.—Five hundred cwt. were sold at about 25m., a very low price. Picked and cleaned root is quoted at 55m. to 75m.

COCAINE.—Higher prices are paid.

COCA LEAVES.—More interest is shown in these, and holders are asking more money. A lot of old import has changed hands.

JALAP is quiet, but prime heavy old root cannot be bought under 130m. Small arrivals of the new crop are in sight.

MATICO.—In face of the large supply the articles is apparently a little weaker. The 26 packages which have just arrived have found no buyers, and another 110 bales are expected.

OILS (FIXED).—*Cod-liver*.—There is very little doing in the article at present. The result of the Lofoden fishing last week is said to have been a better one, and for the prime new non-congealing oil 80m. per cask is now asked.

SABADILLA SEED.—By far the greatest interest has centred this week in this article, all parcels offering in our market being supposed to be controlled by one import house. Prices have advanced rapidly, and 85m. has already been paid. The supply is proportionately a very small one, and a further advance is to be looked for.

WAX.—*Carnauba* selling at slightly lower rates. *Japan* neglected. Good pale squares are held at 94m.

NOTES ON ESSENTIAL OILS.

(From Messrs. Schimmel & Co's Half-yearly Report.)

CAMPHOR OIL.—The so-called "light camphor oil," i.e. that portion of the crude oil which has a low boiling-point, has been so favourably received for employment in the most varying industrial pursuits, that the demand has outrun the supply and the production has been sold for many months in advance. The price also has much advanced, partly owing to the strong demand, and partly because of the increased freight rates which are now applied by the steamship lines to camphor, because of its liability to leakage and its penetrating odour.

CANANGA OIL.—Both varieties are rapidly becoming popular, and special measures had to be taken to secure a sufficient supply of the cheap Indian grade. This Indian oil proves to be extremely well adapted for soap-making purposes, especially in conjunction with oil of linaloes. The finer Java variety may be used as a substitute for ylang-ylang in all cases where the cheaper varieties of the latter oil have been found to answer, because both oils are derived from the same plant, and the extraordinary difference in the qualities may perhaps be caused only by the manner of preparing the oil.

CITRONELLA OIL.—It is a matter of astonishment that this depreciated article should still be quoted per oz. both in Ceylon and on the London market. Some German firms, however, have emancipated themselves from this entirely obsolete, inconvenient, and unsuitable mode of calculation. Owing to the enormous exportation of citronella oil from Ceylon the production of the Straits Settlements falls more and more into the background. Up to the present the gigantic quantities of the oil which have been produced appear to have been brought into consumption without special difficulties, but it remains to be seen whether a continuation, or, possibly, even a further increase in the output, will not cause an accumulation of stock. It is impossible that at the present quotations the production of citronella oil can pay, yet, unfortunately, there has been in commerce no lack of examples to show that the production of such articles is occasionally carried on until all factors have entirely given way, when a drastic process of purification follows in the shape of a general catastrophe.

MASOY BARK OIL.—Several hundred kilos. of this very useful oil have already been brought into consumption, and the New Guinea Company has been requested to procure large supplies of the bark, as there is no doubt that the oil will come into successful use for many purposes. Concerning the source of the bark the last word does not seem to have yet been spoken. Mr. Holmes does not believe it to be the genuine masoy bark, but that of another tree, which, however, he cannot definitely name, as the flora of New Guinea is only very imperfectly known at present.

GERANIUM OIL.—Large consignments may be expected to arrive this year from the island of Réunion, where the cultivation of the plant has been commenced with energy. Hitherto the produce of that island has all been shipped to the South of France, but in future direct exports will be made to Germany; and at the end of the present year it is possible that the first consignments of geranium oil may arrive from Java, in which island the cultivation of essential oils has been commenced with intelligence and energy, and has already progressed beyond the trial stage. Nothing new can be reported about the expensive Spanish and French oils. Prices of both, as well as of the African oil, are very firmly held.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries, &c., will be attended to in the order received.

Liq. Ammoniae Acetatis.

SIR,—Allow me to thank your correspondents for pointing out an error into which I had fallen in my paper on "Solution of Acetate of Ammonium."

Not having read the paper critically since it was first sent to you a month or two since, I do not remember the details sufficiently to know how far the erroneous datum affects the bulk of the matter, for I have not a copy at hand. As soon as I can get time to revise the paper I will ask your permission to supply the required corrigenda. In the meantime I can only regret that error has got the start of truth.

Grey Street, Newcastle,

April 7.

Yours,

BARNARD S. PROCTOR.

The Pharmacy Bill.

SIR,—I have only just now had the opportunity of reading the paper by Mr. Winfrey on this subject, reported in your journal of March 30, and consider it the most logical and conclusive article that has appeared on this question; and I am of opinion if a copy of it were sent to every member of Parliament from each constituency the chances of the Bill being passed would be reduced to *nil*.

Should this opinion meet with sympathy from any other members of the trade, I shall be willing to contribute 10s. 6d. or 21s. towards the expenses of a reprint for this purpose.

A PHARMACEUTICAL CHEMIST. (4/25.)

Bradford, April 6.

SIR,—Will you permit me through your columns to thank the numerous gentlemen who have written me in congratulatory terms on my paper, read before the Chemists' Assistants' Association, on "Some Reasons Why the Pharmacy Bill now before Parliament should not become Law," and which appeared in your journal a fortnight ago.

I regret that, for the present at any rate, I cannot spare the time to obey their wishes by seeking a seat on the Pharmaceutical Council, in order to advocate the views I have freely expressed.

Hall Place, Spalding,

April 9.

Yours, &c.,

R. WINFREY.

Successful.

SIR,—Having read with interest several communications in your valuable organ *re* patents, and the trade going to the dogs, &c., I have been thinking that a *résumé* of my sixteen years' trading as a chemist would not be devoid of interest to the craft. When I entered business on my own account I was fortunate in securing almost all the prescriptions of two very successful M.D.'s, without a word as to returning them any favours for their prescriptions and recommendation. As a natural consequence of that I troubled not a bit about proprietaries of my own (not one did I put up), neither did I care about the patent-medicine trade, though I kept most of them. I was, of course, like a gentleman of high degree, and took in the *Pharmaceutical Journal* regularly,

considering myself as one of the profession. Unfortunately for me both these gentlemen died some eight years ago, within six months the one of the other, and left me hopelessly unprepared for the occurrence. I was completely thrown on my beam ends, and did not know what to do. Luckily for me, at that time the publishers of *THE CHEMIST AND DRUGGIST* sent me a copy of their journal free, which contained a number of valuable recipes. I resolved there and then to throw up the valueless (to me, as a trade journal) *Pharmaceutical Journal*, and became a subscriber to *THE CHEMIST AND DRUGGIST*. Now I can boast of fifty or more proprietaries, all founded upon recipes given in *THE CHEMIST AND DRUGGIST*. What is the result? We did not feel the effects of cutting in this town till about the time I lost my two great supporters. At that time, also, two or three grocers started selling patents at 9½d., &c. The decline in my patent-medicine account is about 200 per cent.; dispensing, comparatively none—about two prescriptions a day. Profits for the last eight years, 5 per cent. more than in the eight years of plenty. Proprietors of patent medicines are certainly in their own light in encouraging cutters. Already several patents are boycotted by the grocers and stores in this town. I will give you my experience of last Saturday. I make a good show on the counter and round about of my own articles, other people's goods out of sight. Three customers came to my shop on Saturday (not at the same time), "A bottle of Lamplough's Saline, please" (going to fetch it). "Oh, Tonic Saline!" picking it up from the counter; "how much is this?" "1s. 6d." "I will have this instead." Same process was gone through with the other two—only one of them wanted Eno's.

Let people say what they will—one's own goods can be made to pay as long as you put up a reliable article. I am now above all cares and anxieties, having made sufficient out of my business to retire in ease and comfort.

Yours faithfully,

HOPEFUL.

April 8.

Prodigals Coming to their Senses.

SIR,—This last decade has witnessed some droll scenes but the drollest of all was the meeting of middlemen and manufacturers. The former, after a period of riotous cutting against each other, are now asking the latter to kill the fatted calf on their behoof. Such is the position, and such will be the position at the end of the twelve months, to which period the meeting stands adjourned. Can the proposition of the middlemen be made in all seriousness? Do they really expect makers to protect them from the results of their own insane folly?

If this question be looked at from a consumer's point of view, it means that they are to be made to pay a higher price for certain goods in order that others may live. Is this protection or free-trade? Makers are to go to the expense of costly advertisements as before, but they are to put a duty upon the consumer for the benefit of those who care neither one jot for the consumer nor for the maker. Can the most complete system of protection go any further?

Look at the question from a maker's point of view. The expenses of advertisements will remain the same, or will increase, the cost of materials may be said, almost with certainty, to have now reached the lowest point, the cost of carriage certainly has. The makers will say, If we allow a further 10 per cent., what will these middlemen do with it in the immediate future? Do! Do as the juvenile Bassanio did with his arrow—send it after its fellows. So the calf-killing begins. In these days, what do we see taking the place of that British fetish, free-trade, but rings, syndicates, associations, unions, monopolies, &c., whose sole object is to increase prices, or, what is the same thing, to restrict production, the very object that protectionists and fair-traders have in view. Is it possible that free-trade is no longer the guiding star of this country, and that middlemen, having left their traditions, for they are the backbone of free-traders, have become neophytes in the school of protection?

That the meeting was the drollest of the droll will, I think, be clear to all; but what the result will be is not so clear; nevertheless, the departure will no doubt be productive of instruction, and perhaps not a little diversion, to

A SPECTATOR. (24/47.)

Check upon Returns.

SIR,—I consider Loft's patent till the best and simplest check. I am using two, and if I had another shop should add the third. On buying a new till there ought to be a dozen bells given, as they are constantly "going wrong." It cost me 1s. to get two from Loft's about a fortnight ago.

Yours truly,
SHOP ROUND. (24/26.)

Half-price Letters.

The secretary and patentee of the Half-price Closed Letter Company (Limited) writes to us in reference to a paragraph published last week, which stated that two correspondents were dissatisfied with the products of this company. The secretary says: "I cannot divine what your correspondents mean by 'expressing disapproval' of the envelopes now being issued by this company, as they are considerably better than the hand-made samples we at first sent out." Then he goes on to describe them in a style and at length better suited for our advertisement pages than for this section. A paragraph at the end of his letter is of some general interest.

"The Post Office," he says, "will not let our envelopes be sold at post-offices, while every agent must be licensed by the Inland Revenue. Such licences they, however, load with the proviso (which they have not done with us) that the licensees must also sell all kinds of miscellaneous stamps, upon which there is no profit at all. The Inland Revenue refuses to grant licences for some of our agencies because they are too near a person already licensed, although the person so alluded to (being often a postmaster) is not allowed by their fellow-department to sell our envelopes, for which alone we want the licence granted."

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

24/40. A. G. Keith.—**Styrax Liq.**—The strained storax of the Pharmacopœia is meant in your prescription, but the quantity of fat ordered is only about one-half of what is usual.

An Ointment Query.

I think the general practice with small quantities of ointments of the class mentioned is to rub them up on a slab or in a mortar.

ADELAIDE.

Suspending Bismuth Subnitrate in Mixtures.

SIR,—I should like to make a few remarks on Mr. Lawrence's reply to my criticism of his paper on the above subject. From the first I quite understood Mr. Lawrence's assertion, that he obtained his best results by using only one-fourth part of compound powder of tragacanth to each part of bismuth, consequently it is unnecessary to again refer to his paper on this point. If Mr. Lawrence simply condemns the use of an equal weight of compound powder of tragacanth to suspend an equal weight of bismuth on the unsatisfactory result he obtained when he used ʒi. of the former to suspend ʒj. of the latter, in only 1 oz. of water, I would remind him that his proportions are not typical of an ordinary bismuth mixture. I still maintain that 1, 2, or 3 drachms of bismuth subnit. in 6 or 8 oz. of water (typical proportions of a bismuth mixture) require an equal weight of the compound powder to suspend it satisfactorily. I am not forgetful that gums are objectionable in many cases of stomach disorders; but Mr. Lawrence evidently forgets that it is the prescriber, and not the dispenser, who sanctions their use in such mixtures. My original experiments included all Mr. Lawrence's suggestions of (1) mixing bismuth and water, and (2) bismuth and water with glycerine, and the result, as I have already mentioned, was that glycerine has no power of suspending bismuth subnitrate, and such mixtures are no better with than without it; besides, glycerine would be a very objection-

able agent in cases of diarrhœa, enteritis, &c. In conclusion, when I mentioned that, from a dispensing point of view, bismuth carbonate is preferable to the subnitrate, I did not advocate the substitution of the former for the latter, and I fail to see how my remark could in any way affect the faithful dispensing of such mixtures.

Yours faithfully,

10 Cromwell Place, Ayr.

D. MACREATH.

The Strengths of Oleates.

SIR,—The methods commonly used in describing the strengths of the various oleates seem to me to be indefinite and mystifying. The other day I had the following to dispense:—

Iodoformi	..	..	..	..	..	ʒj.
Ol. eucalypti	..	..	..	..	..	℥xxx.
Hydrarg. oleat. 20 per cent.	..	..	..	..	..	ʒss.
Lanolin, ad	..	..	..	..	..	ʒij.

M. Ft. ung.

Now what is here intended? Taking the reading literally one would be justified in using a preparation containing 20 per cent. of oleate of mercury, the formula of which, I presume, would be $Hg_2(C_{18}H_{33}O_2)_2$. But I suppose most dispensers would use an "oleate" in the preparation of which 20 per cent. of yellow oxide of mercury had been employed.

In the case of other oleates (oleate of copper, for instance) where salts other than the oxide of the metal are used as the basis the ambiguity becomes more apparent. For example, what ought to be dispensed for "Cupri oleas 20 per cent."? Perhaps you or some of your readers will help to elucidate the matter.

Yours &c.,

GALACTOSE. (25/29.)

[Our correspondent somewhat exaggerates the trouble arising from the want of uniformity. So far as the oleate of mercury is concerned the percentage stands for the amount of mercuric oxide in the preparation. Here there is no ambiguity whatever, and there is no necessity for creating it. As to what is implied in regard to other metallic oleates, see "The Art of Dispensing," pp. 115 and 116, and Martindale's "Extra Pharmacopœia."—Ed. C. & D.]

Dispensing Conveniences.

SIR,—The tone and style of the letter from "Puff-box" in your last issue are not such as to invite a lengthy correspondence. As I have two of the stoppered mixers in frequent use, and find them very serviceable, I am not greatly disturbed by the title adopted by my critic. It is obvious that a vessel whose graduations do not extend below half an ounce cannot be used for the accurate measurement of quantities less than that amount, and I do not think I have been guilty of saying that it could.

So far, although I use the salt almost daily, I have not met with any pieces of citrate of potash so hardened as to refuse to dissolve on shaking; if I did, I should be tempted to think that there was something wrong with the sample I was using. As to frothing, is it altogether an unknown or illegitimate proceeding to get rid of it by pouring from one vessel into another? Finally, the enhanced cost of the mixer over a 10-oz. measure is exactly 3d., so that either on "Puff-box's" theory or mine you can have a good deal of fun for your money.

Yours very obediently,

J. F. BROWN.

SIR,—My natural modesty, coupled with the respect in which I hold Mr. Brown as a correspondent, prevented my opening the discussion on the stoppered mixture. As a practical man, I must endorse the remarks made by "Puff-box" *in toto*. *Apropos* of stirring, I shall never forget the old spoons so freely used in graduated 8-oz. measures by the dispensers at Godfrey's. Those dear old silver spoons, many years ago, were like long-handled miniature shovels, and must have been in use nearly a century, for some of them were worn more than halfway up the bowl. I thought nothing could be better for crushing hard lumps of pot. cit. or pot. chlor., and for facilitating quick and accurate dispensing

generally. Since then I have always advocated the use of the spoon and a large graduated measure (8-oz. or 10-oz.) in mixing medicine, in preference to shaking the salts and menstium in the bottle to be sent out. I think "Puff-box" and many others will agree with me in condemning the manufacture of the stoppered mixer as a wasteful and ridiculous excess.

Obediently yours,

Topsy.

LEGAL QUERIES.

16/39. *Cotswold*.—(1) The "ounce" referred to in Mr. Gibson's formula is the avoirdupois ounce or $437\frac{1}{2}$ grs. (2) Yes, the wording would render the label liable to stamp duty. This you would see in a moment by consulting Mr. Alpe's book.

18/10. *W. F. G.*—(1) Consult the advertisements in the DIARY. (2) You may advertise that you perform dental work. All that the Dentists Act prevents you doing is calling yourself a dentist, dental surgeon, or any other similar term, and recovering fees in court for work done. (3) We do not know of any foreign university of repute which grants dental degrees *sine curriculo*. Such degrees are valueless in this country, as they cannot be registered; and their public use by an unregistered man would make him liable to prosecution.

21/57. *Rheum*.—You may add or prefix other words to your registered trade-mark, but the added words are not protected, and you must not indicate by any means that any of the unregistered words are registered. You do not need to consult the registrar about such matters. (2) You cannot buy from anyone the exclusive right of making a certain preparation unless the same has been patented; but it may be that what you bought gives you the exclusive right to use a certain title. We cannot tell what evidence would be necessary.

23/14. *Country Chemist*.—The labels do not render the preparations liable to medicine-stamp duty, but the advertisement would make them liable, because the name of the maker is printed in the possessive case.

25/17. *Trag*.—No doubt in strictness you are required to get permission and to give bond if you wish to use methylated spirit in the preparation of French polish, &c., if you are a retailer of the spirit.

25/5. *Pyrophosph*.—There is no law to prevent an unqualified person taking an apprentice and undertaking to "teach him the trade of a chemist and druggist." But if he should not satisfactorily fulfil his contract there would be presumption in his disfavour in the event of a case coming to court. The certificate which has to be produced by a candidate for the Minor examination is simply to the effect that he has been practically engaged for three years in the translation and dispensing of prescriptions. It is not demanded that he shall have been in the employment of a registered chemist, and although the form supplied by the secretary of the Pharmaceutical Society seems to imply that the certifier of the declaration should be a chemist and druggist or medical practitioner, this demand could not legally be enforced.

25/16. *Revilo*.—You can get forms for application for the registration of a trade-mark from many principal post-offices, or from the Trade-marks Office, Southampton Buildings, Chancery Lane, London. The fees for simple registration amount to 25s. You will find lengthy particulars about registration in THE CHEMISTS' AND DRUGGISTS' DIARY for 1888.

24/65. *Sussex Chemist*.—The exemption from jury service applies to pharmaceutical chemists in England only.

7/26. *J. Brown*.—An apprenticeship indenture is not valid unless it is stamped. Where no premium is paid the stamp is 2s. 6d., in other cases the stamp is 5s. for every 5l. or part of that sum. The signatures of the master and apprentice are sufficient, but that of the latter's father is desirable. See article on "Apprenticeship" in THE CHEMISTS' AND DRUGGISTS' DIARY, 1888.

15/13. *Physic*.—The "gill" is defined in the Weights and Measures Act as the fourth of a pint.

MISCELLANEOUS INQUIRIES.

A large number of correspondents ask us for formulae and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulae or replies required are in print we must decline to do so. Back numbers of our weekly issues can be obtained from the publisher at 4d. each.

Correspondents who have made inquiries regarding the following subjects will find the information in the numbers indicated.

25/9. *Liquid Annatto*.—See page 314 of current volume.

25/10. *Invalids' Jellies*.—See DIARY, page 256.

24/5. *Ink Powder*.—December 29, 1888, page 900. The "parts" should be taken in grammes.

17/15. *Assistant* does not say clearly whether it is a varnish or a polish he requires.

21/63. *Atlas*.—You cannot now get space in the Paris Exhibition; the only way you can get your speciality exhibited is to get someone who is exhibiting to show it with his goods. We do not know of anyone open for that business. (2) Theatres can be perfumed by means of a steam atomiser or by spray-producers.

22/53. A. W. S.—Quinine Hair-wash:—

Quinine sulphate	gr. xxx.
Tincture of cantharides	3v.
Glycerine	3v.
Proof spirit	xxx.
Tincture of rhatany	3j.
Lavender water	3iij.

Mix.

22/38. *Pruni*.—(1) See Mr. Proctor's paper in our issue of March 22. (2) *Spt. Ammon. Arom.* may be made without distillation. The preparation is ordered to be distilled under the supposition that it gives the spirit of finer aroma and which is not liable to become yellow; but we believe that these changes are due rather to the existence of aldehyde in the spirit used, which changes in contact with the alkali. The preparation should be filtered through charcoal.

23/3. *Friar's Balsam*.—See last week's Correspondence.

3/63. *Preservation of Seaweeds*.—*Adelaide* writes:—"Your correspondent does not say if seaweeds are to be preserved dry or in some liquid. I have some pressed and dried upon cardboard and framed in glass. They are about two years old, and the colours are as natural and brilliant as when first collected."

23/8. *Enquirer*.—*Silver Ink* is made by rubbing silver leaf to fine powder and suspending in weak mucilage. For a stamp ink we would use a mixture of gelatine 3 grains, glycerine 2 drachms, water and alcohol of each 6 drachms.

24/14. *A. M. S.*—(1) Salicylic acid in the proportion of 1 grain to 1 oz. is sufficient to add to **Emulsio Olei Morrhuæ, B.P.C.** (2) Sulphate of potash is understood to be used in pil. coloc. co. for the purpose of dividing the oil of cloves. A better excipient than water is a mixture of solution of potash 1 drachm and water 7 drachms.

20/49. *Novum Castrian.*—For **Herb Beer Extract** see page 495 of last volume (October 6). The full pungency of ginger can only be extracted with alcohol, as the root owes its pungency mainly to a resin.

20/70. *J. B. F.*—We cannot trace the formula. Is there nothing in the **DIARY** that would suit you?

13/10. *Spero.*—Try Barrett's "Dental Surgery" (Lewis, 3s.). The most generally useful book for chemists beginning dental practice is *Tomes's "Manual of Dental Surgery"* (Churchill, 14s.). The numbers containing the articles on dentistry are out of print.

21/72. *W. H. S.* asks what subjects are included in chemical physics. The Pharmaceutical Society says—Light, heat, magnetism, and electricity; but a knowledge of hydrostatics and pneumatics is understood.

16/50. *Spiteful.*—**Mixture for Females.**—For amenorrhœa Dr. Hargreaves gives the following:—

Magnesie sulphatis	3ss.
Ferri sulphatis	gr. xx.
Acidi sulphurici arom.	3ij.
Aquæ chloroformi ad	3viiij.

M. A table-spoonful to be taken three times a day, immediately after meals.

You should read Dr. Hargreaves's manual, "Venereal Diseases" (Kimpton, 5s.).

25/22. *Alpha.*—**Locurium.**—Do you not mean lactucarium?

22/68. *Balsam.*—The formula for **Zylobalsamum** has not been published.

25/23. *Iodoform.*—Coumarin is the most effective **Deodorant of Iodoform**. As soon, however, as deodorised or perfumed preparations of this drug are applied to the skin the iodoform asserts itself, simply because it is less volatile than the deodorants.

24/61. *Timon.*—The furniture-jelly is a mixture of turpentine and paraffin.

25/15. *A. J. J.*—(1) For the mechanics of the **Medical Preliminary** you should use either Bottomley's "Dynamics" (Collins's series), or Newth's "Natural Philosophy." (2) The College of Preceptors is perhaps the most convenient place to take the subject. See our issue of February 9, page 202.

25/5. *Pyrophosp.* asks if the following mixture would be a suitable one to put into stock in place of the Board of Trade **Diarrhœa Mixture**, using the same label:—

Acid. sulph. dil.	3x.
Tr. catechu	3iss.
" opii	3vj.
" cinnam.	3iss.
Æther. chloric. D. & F.	3ij.
Dec. hæmatoxyli conc. 1-7	3iv.
Aq. dest. ad	Oij.

The label gives the dose as: 14 years and upwards, one to two table-spoonfuls; 4 years old, two tea-spoonfuls; 1 year, one tea-spoonful; $\frac{1}{2}$ year, half a tea-spoonful; and so

on in proportion, according to age, every two, three, or four hours, as the urgency of the case may require. [The appearance of the mixture is its worst feature, otherwise it is a good preparation, but should not be used for children under 4 years old. It is never advisable to give children opium when they are suffering from diarrhœa. Their condition then is feeble, and they are keenly susceptible to the influence of the narcotic, small doses sometimes producing grave results. For the diarrhœa of young children there is nothing better than the following mixture:—

Ferri sulphatis	gr. xvj.
Syrupi tolutani	3j.
Spt. chloroformi	3j.
Aquæ ad	3iv.

Dose: From a small to a large tea-spoonful every four hours.]

22/56. *Sapo.*—**Common Soap** (to make).—Dissolve 10 lbs. of 90-per-cent. caustic soda in $4\frac{1}{2}$ gallons of water, and stir occasionally until dissolved. Then take 75 lbs. of fat (if solid, melt it) and pour the lye into it, stirring all the time with a wooden stirrer. In fifteen or twenty minutes the mixture should have the appearance of honey, and it is then to be poured into a suitable box or mould, and kept in a warm place for a day, until it sets; then cut up with a wire.

25/45. *Leander.*—You are experiencing the difficulties which many have had with **Linimentum Terebinthinæ**. If you test your soft soap we think you will find it alkaline. If so, you should dissolve the camphor in the turpentine, add the soap and water, and shake until a creamy emulsion is formed.

26/3. *Paste.*—You will find a formula for a similar preparation in the **DIARY**.

26/2. *W. J. S.*—There is a good deal of impure gutta-percha in the market, and we should think that you have got hold of some of this. The solution used by shoemakers presents no difficulty in making if the gutta-percha is pure.

26/12. *Sparrow.*—We did not look for anything else.

25/74. *Veterinary.*—See 15/70 in last issue.

26/17. *W. J. T.*—The enamelled-iron letters are the most permanent and the cheapest.

26/38. *Cinchona.*—You do not tell us the strength of the preparations which you send. A is just a little darker than the natural colour of inf. cinchonæ B.P., 1867. We cannot tell by looking at it how B is made, but we may say that careful concentration in vacuo is the only way in which you can obtain a clear and dark preparation.

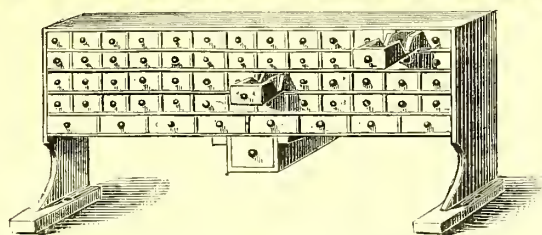
26/15. *C. M.*—You would not infringe the Dentists Act by exhibiting a case of teeth with the words "mechanical dentistry" thereon. Unqualified persons can sell salts of lemon and red precipitate ointment.

25/31. *Josephus.*—You, being qualified, can own the business, and as the law now stands you can leave it under the management of an unqualified person. The latter, however, if he sells a poison, might be fined, but this power has never been exercised by the Pharmaceutical Society.

24/51. *T. Laurence.*—**Varnish for Fly-hooks.**—Ordinary shellac varnish is used to varnish the tying of hooks for bait-fishing and the heads of flies. The red varnish sometimes put on Stewart tackle for worm-fishing is made from red sealing-wax and methylated spirit. Two coats of the shellac varnish should be applied, the first being allowed to dry before the second is applied.

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Gold Medal, Hygienic Exhibition, Ostend, 1888.



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Sole Manufacturer and Inventor, H. MACK, Ulm a/D.

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Wholesale Agents for Great Britain, OSBORNE, GARRETT & Co., London, W.

THE NURSERY, THE SICK ROOM, THE TOILET.



THE ARIEL

POWDER
PUFF.

(MARY WEDLAKE'S PATENT.)

Is a New Invention by which the Powder is contained in the Puff, and from which it is distributed in such a manner as to secure an even dispersion wherever directed. The Ariel Powder Puff never touches the skin, and, therefore, risk from contagion is impossible.

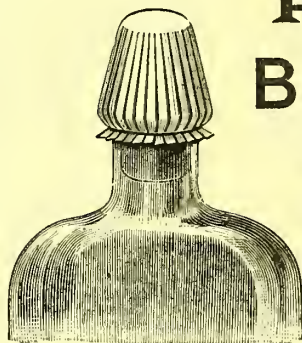
It may be carried in the pocket, always ready for use. R. FARRAR, House Surgeon, St. Bartholomew's Hospital, writes:—"It is simple, ingenious, and effective."

Dr. G. E. YARROW, City of London Lying-in Hospital, writes:—"It possesses distinct advantages over the old form, amongst the most important of which is, that by its use powder is delivered on parts which are with difficulty reached by the ordinary puff."

Price 8s. and 11s. 6d. per dozen.

Of all Wholesale Houses, and of the Patentee direct.

M. WEDLAKE, 8 Berkley Rd., Regent's Park, London.



HUNT'S BOTTLE CAPS

Pleated Paper, from 8d.
per Gross.

LONDON:

25 Great Windmill St., W.

Depot of DIGNE'S ENZYMES.

PRICE'S SANITARY SOAPS.

GLYCERINE & CARBOLIC ACID.

GLYCERINE & COAL TAR.

GLYCERINE & EUCALYPTOL.

GLYCERINE & SALICYLIC ACID.

GLYCERINE & THYMOL.

PRICE'S PATENT CANDLE

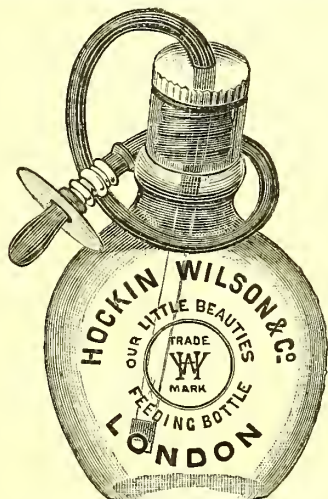
COMPANY, LIMITED,
LONDON & LIVERPOOL.

GOING LINES.

LITTLE BEAUTIES FEEDERS.

THE BEST FEEDERS MADE.

All fitted with best ENGLISH Black Indiarubber Tube.



1s.—Each in box, with spare tube and brushes, equal to most 1/6 Feeders	5/6 doz.
6d.—Green Glass Screw Neck, Loose	34/- gross.
6d.—" Box Top Corks, Loose	30/- "
6d.—White Glass " " " "	33/- "

The 6d. may be had 1 doz. in wood box at 2s. gross advance.

TEETHING PADS.

No. 826.

1 dozen on Card, Bone and Indiarubber Teat, 2/6 dozen.

GLYCERINE PURGATIVE SYRINGES.

No. 821.—All Glass	3/6 doz.
" 822.—Glass, with Vulcanite Pipe (cheap form)	7/- "
" 827.—" " Piston Pipe, best make	12/- "
" 828.—Glass, with Vulcanite Mounts and Nickel-plated Piston	13/- "
" 829.—All Vulcanite	13/- "

COMPRESSED CHLORATE OF POTASH.

In Tin Boxes with Leather Labels, 40 Pellets, about, in each Box.

1s. 6d. per Dozen Boxes.

17s. Od. per Gross.

1 lb. Bottles, 2s. 1b.

ANY FORMULÆ MADE
UP IN PELLETS AT
SHORT NOTICE.

FULLER'S EARTH.

In elegant Decorated Tin Boxes, which may be used as Puff Boxes when empty.

No. 626.—1 dozen on cartoon, 3/- doz.

May also be had filled with Violet Powder, No. 626v, 3/3 doz.

No. 748.—NAIL FILES, Real Ivory, 1 doz. assorted on Card, 3/- doz.

PLEASE CALL AND SEE OUR SHOW ROOM, WHICH IS FULL OF NOVELTIES!

IN ORDERING KINDLY STATE NUMBERS TO AVOID MISTAKES.

QUOTATION for all *SUNDRIES* on *APPLICATION*. *SPECIAL PRICES* for *LARGE QUANTITIES*.

HOCKIN, WILSON & CO.

13 to 16 NEW INN YARD, 186a TOTTENHAM COURT ROAD, LONDON, W.;
And 64 Corporation Street, MANCHESTER.



Than any other Toilet Soap, being manufactured according to the suggestion of Dr. Unna, the eminent German Dermatologist.—See *Chemist and Druggist*, July 10th, 1886.

Price 12/- per dozen Boxes of 3 Tablets each.
New Mown Hay, Musk, and Heliotrope.

May be obtained of all Wholesale Chemists and Druggists, or from the Sole Manufacturers,

H. BRONNLEY & CO.
STEAM WORKS:
34 Verulam Street, Holborn, E.C.

COOK'S ANTISEPTIC SOAP

(THOMSON'S PATENT),

Has been tested in a Physiological Laboratory as a Germ Destroyer, and proved to be more efficient than any other experimented with.
(See "Journal of Chemical Industry, 1888, No. 3.) Of great value in CASES OF

ECZEMA, RINGWORM, SCABIES, FAVUS
AND OTHER SKIN DISEASES.

See "The Lancet," 12 May, 1888, page 936.

Price in 3-Tablet Boxes, per doz. 12/-; Selling Price, 1/6; in $\frac{1}{4}$ -gross Boxes, 10/6 per box

CAN BE OBTAINED THROUGH

MESSRS. MAW, SON & THOMPSON, LONDON, or of
EDWARD COOK & CO., HOUSEHOLD and TOILET **SOAP MAKERS, LONDON, E.**

ORIENTAL AROMATIC SALTS,

FOR BATH AND TOILET PURPOSES.



The **ORIENTAL AROMATIC SALTS**, when dissolved, render the water very soft, and impart a most agreeable and refreshing perfume that can be diffused with advantage in a room where the air is close and depressing.

The **ORIENTAL AROMATIC SALTS** strengthen the tissues, perfume and invigorate the body, preserving it from contagious diseases, and cleanse the pores, thus facilitating the cutaneous transpiration so necessary to life.

The **ORIENTAL AROMATIC SALTS** are unrivalled for beautifying and preserving the Skin, rendering it soft and velvet-like; and for keeping the complexion perfectly bright and clear.

They are indispensable in the Bath as well as in the Bedroom, and should be used by everybody. In most cases of Skin Diseases these Salts will be found invaluable.

Sold in Bottles at 1/6. Wholesale of the Patentees and Manufacturers—

S. TRAVADO & CO., 27 Jewry St., E.C., LONDON.

To be had also of Messrs. BREIDENBACH & CO. Perfumers to the Queen,
157b NEW BOND STREET, W.

BATES' SULPHUR SALT
(REGISTERED.)
AND
FRIZZETTA
(REGISTERED.)
Price, 1/9 & 4/6.
RETAIL 1/6.

F. W. BATES, Chemist, Brooks's Bar, MANCHESTER.

Telegraphic Address—"FRIZZETTA MANCHESTER."

SUPPLIED BY ALL PATENT MEDICINE HOUSES.

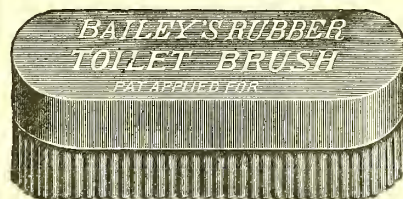
PURE OTTO OF ROSE,
SPECIALITY OF
SHIPKOFF & CO.
DISTILLERS AND EXPORTERS,
KIZANLIK, BULGARIA.

Agent for Great Britain—G. P. BAKER, 19 Ivy Lane,
LONDON, E.C.

THE OTTO OF ROSE which this house distills and exports is known above all by the absolute purity of its quality and the unexcelled sweetness and strength of its odour. It is guaranteed to be the finest essence produced in the famous Rose Valley of Bulgaria.

BAILEY'S RUBBER BRUSHES.

CLEAN HANDS.



Nothing has ever been invented that will so thoroughly cleanse and whiten the hands as our rubber brushes. Used with soap and water they will remove all kinds of stains without injuring the most delicate skin. They are made of the best Pará Rubber, and will last for years.

Price 1s., 2s., and 2s. 2d. each retail, or 8s., 17s., and 18s. per dozen.

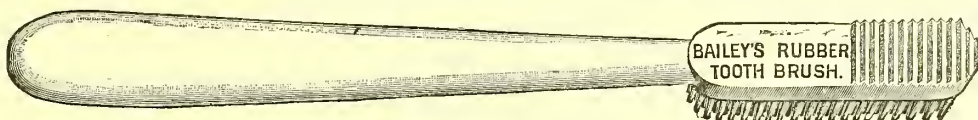


Our Bath and Flesh Brushes have been so well received by the trade, and have met with such ready sale, that it is unnecessary for us to say anything in praise of them here. We shall continue to make them of the very best quality of rubber obtainable, and, as we are advertising them largely, we have every confidence that they will continue to sell well.

PRICE

(in neat metal cases and with wood handles),

£2 2s. per dozen.



We are just now introducing our tooth brushes. They are made in two sizes, of the best rubber, and are certain to give satisfaction. Our prices are 6s. and 6s. 6d. per dozen. We will be pleased to send samples at the dozen prices to any chemist who may wish to see what the goods are like, and will leave the brushes to speak for themselves.

C. J. BAILEY & CO., 30 SNOW HILL, LONDON, E.C.



The Chemist and Druggist says:—Mr. Arthur W. Shirley has produced a very attractive biscuit china figure, represented in the annexed engraving. The advertisement is effective without being at all vulgar, and the little crier, we expect, will soon be a familiar figure about the country.

OYEZ! OYEZ!! OYEZ!!!

THIS ELEGANT BISCUIT-CHINA FIGURE, AN ORNAMENT TO ANY SHOP,

GIVEN AWAY

To Purchasers of 25/ worth of

SHIRLEY'S A1 BRAND MENTHOL

OR TWO IF 40/ ORDER IS PLACED.

The following special parcels have been arranged to suit all classes of trade:—

PARCEL 1. 25/. 4 doz. 2d. 1 doz. 3d. 2 doz. 3½d. 3 doz. 4d. 2 doz. 6d.	PARCEL 2. 25/. 4 doz. 6d. 2 doz. 4d. 1 doz. 1s.	PARCEL 3. 25/. 3 doz. 3d. 2 doz. 1s. 1 doz. 4d.	PARCEL 4. 25/. 1 doz. 9d. 2½ doz. 1s. ½ doz. 1s. 6d.
PARCEL 5. 40/. 4 doz. 2d. 2 doz. 3d. 3 doz. 3½d. 5 doz. 4d. 4 doz. 6d.	PARCEL 6. 40/. 5 doz. 6d. 3 doz. 4d. 2½ doz. 1s.	PARCEL 7. 40/. 4 doz. 6d. 4 doz. 4d. 1 doz. 9d. 2 doz. 1s.	PARCEL 8. 40/. 4 doz. 1s. 2 doz. 9d. ½ doz. 1s. 6d.

By calculating what each of the parcels would realise when sold, it will be found that they yield an average profit of 80 per cent. to the retailer on his outlay.

Numerous letters have been received already, testifying to the satisfaction given by this little figure. One firm writes—"We have just received the figure, and must indeed say we are highly pleased with it, and have it in a prominent place on our counter." Another writes—"It is quite the centre of attraction of my establishment." Another—"Figures sold a dozen cones first day of showing them."

A1 COCAINE & MENTHOL 6d.
TOOTHACHE TUBE.

12 ON A CARD. 3/6 DOZ.

Sells really well.

A1 CORN & WART TUBE, 6d.

12 ON A CARD. 2/3 DOZ.

BE READY FOR THE SEASON.

ARTHUR W. SHIRLEY, 30 PATERNOSTER SQUARE, LONDON, E.C.

T. & H. SMITH & CO.

MANUFACTURERS OF

MORPHIÆ HYDROCHLOR.

In powder and crystals.

MORPHIÆ ACETAS

MORPHIÆ TARTRAS

Introduced by us and specially prepared
for hypodermic treatment.

CODEIA

APOMORPHIÆ MUR.

ALOIN

RESINA SCAMMONII

JALAPINE

SALICINE

CHLOROFORM PURE

CHLOROFORM METH.

Our brand has been for many years known to
the Wholesale Trade as absolutely pure.

GINGERINE

CAPSICINE

CAMPOR MONOBROM.

EDINBURGH Address—21 Duke Street.

LONDON Address—12 Worship Street, E.C.

NEW YORK Office—20 Cedar Street: FRAS. JAS. MACNAUGHTAN, Agent. [1]

PAPAIN (FINKLER)

The New DIGESTIVE FERMENT,
combining the action of
PEPSINE and PANCREATINE.

PIL. PAPAIN (FINKLER), in bottles of 25, 50, and 100 (1 and 2 grs. each).

PURE SALOL

(Professor NENCKI'S PATENT.)

The New Antiseptic and Anti-Rheumatic Remedy.

Most valuable in the Cure of Acute and Chronic Rheumatism, Dysentery, Cholera, &c.

QUININE SULPHATE

And all other ALKALOIDS ob-
tained from Cinchona Bark.

Manufactured by the FABBRICA LOMBARDA DI PRODOTTI CHIMICI, MILAN,
OBTAINABLE THROUGH THE WHOLESALE AGENT,

B. KÜHN, 36 ST. MARY-AT-HILL, LONDON,

AND ALL THE WHOLESALE DRUG HOUSES. PRICE LIST AND PAMPHLETS ON APPLICATION.

C. F. ASCHE & CO.'S HAMBURG

NJIMO SYRUP (The NEW TONIC).

NJIMO PILLS.

KAMALA (The Remedy against Tape Worm).

WORM TABLETS.

CHOLERA DROPS.

TAMARIND PRESERVES,

PREPARED WITH

Santonin or Pepsin.

PHARMACEUTICAL PREPARATIONS.

FLUID EXTRACTS,
TINCTURES & INFUSIONS,
COMPRESSED DRUGS of all kinds.
TABLETS, OVALS, PILULES, GRANULES,
TROCHES, LOZENGES, PASTILLES, CAPSULES.
MEDICINAL CIGARETTES—12 different kinds.

SOLE AGENTS: **FUERST BROS.,** 4 COTHALL BUILDINGS,
LONDON, E.C.
Telegrams—"FUERST LONDON." Telephone No. 462.

LOFTHOUSE & SALTMER,

MANUFACTURING CHEMISTS, WHOLESALE & EXPORT DRUG MERCHANTS
HULL,

Manufacturers of all Pharmaceutical Preparations on the best and most improved principles.
QUOTATIONS ON APPLICATION.

SOLUT. ÆTHERIS NITROSI (Æther. Hyponit.)

1 part to 5 Sp. Vini Rect. 56 o.p. makes Sp. Æth. Nit. 850.

This concentrated preparation is carefully drawn in our own laboratory, is highly recommended, and is daily finding increased favour with the trade for making Sp. Nitre, as required for use, and thus avoiding the risk of a development of free acid, which is more or less prevalent in Sp. Nitre that has been drawn some time. Price in Winchester Quarts, 3s. per lb., net.

Importers of Cod Liver, Castor, and Olive Oils; Otto de Rose, and all Essential Oils; Valentinia Saffron; Vanillas; Fruit Essences; Carmine; Aniline Dyes; Bees Wax, &c., &c. Applications for Special Quotations invited.

ESTABLISHED 1837.

H. TROMMSDORFF,

MANUFACTURING CHEMIST,
ERFURT.

SPECIALITIES: ALKALOIDS

Atropine,
Aconitine,
Adonidine,
Cantharidine,
Duboisine,

Helleborine,
Hyoscyamine,
Picrotoxine,
Nicotine,
Solanine,

Veratrine, etc.

PURE CHEMICALS

For Pharmaceutical, Analytical,
and Scientific purposes.

SOZOIODOL PREPARATIONS.

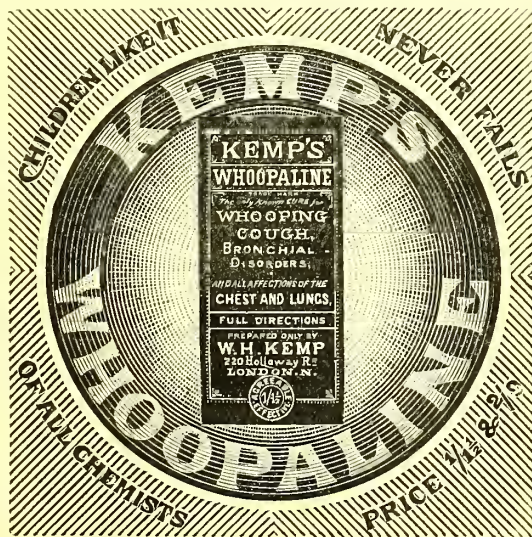
Sole Agent for the U.K. and the Colonies:

FREDERICK BOEHM, LONDON,
27 Billiter Square Buildings.

KEMP'S "WHOO PALINE"

FOR

The Relief and Cure of Coughs, Colds, Bronchitis,
Whooping-Cough, Loss of Voice, Difficulty of
Breathing, and all Affections of the Chest,
Throat, and Lungs.



PRICE 1s. 1½d. and 2s. 9d. PER BOTTLE.

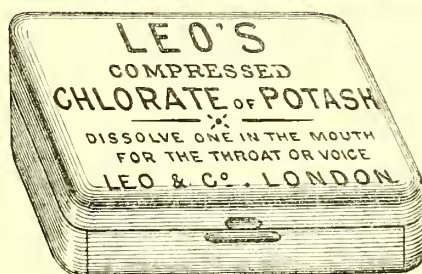
Sold by all Chemists and Patent Medicine Dealers.

LEO & CO.

MANUFACTURERS OF

COMPRESSED CHLORATE OF POTASH,

Chlorate of Potash and Borax,
&c. &c.



Our Goods are guaranteed the Best of any of
the cheap Compressed Goods in the Market.

They are supplied by all the Wholesale Houses.

Quotations given for large and small quantities.

8 CREECHURCH LANE, LONDON, E.C.

DR. LALOR'S PHOSPHODYNE



For TWENTY-FIVE YEARS has maintained
its world-wide reputation as
THE ONLY SAFE RELIABLE PHOS-
PHORIC REMEDY ever discovered for the
Permanent Cure of Brain Wreckage, Paralysis,
Sleeplessness, Harassing Dreams, Premature
Decay of Vital Power, and all Functional and
Diseased Conditions of the System dependent
upon the Deficiency of the Vital Forces. It

Cures Dyspepsia, Nerve and Heart
Disease.

Cures Kidney and Liver Complaints.

Cures all Blood Disorders.

Cures Consumption and General De-
bility.

Checks all Wasting of the Vital Forces,
from whatever cause arising.

THE EFFECT of this Standard Phosphoric
Remedy in Nervous Debility and its Kindred
Evils is immediate and Permanent, all the
Miserable Feelings and Distressing Sym-
ptoms disappearing with a rapidity that is
REALLY MARVELLOUS.

DR. LALOR'S

PHOSPHODYNE

HEALTH, STRENGTH, AND ENERGY.

Is the only Medicine of the kind or name awarded a Certificate of Merit at the
Calcutta Exhibition, 1883-4, where all Countries were Exhibitors, and the only
Trade Mark—"PHOSPHODYNE"—Registered and Protected under the Trade
Marks Act.

THOUSANDS of unimpeachable Testimonials from all parts of the World,
and from the highest Medical Authorities, prove conclusively the Verdict
Universal that in the World of scientific research no other Phosphoric Pre-
paration has received such exalted praise and distinguished recognition.

Full Printed Directions for the guidance of Patients in the Self-Treatment
of the above Diseases are enclosed with each Bottle.

Sold in bottles at 4s. 6d. and 11s. by all Chemists throughout the World.

MANUFACTURED ONLY AT

DR. LALOR'S PHOSPHODYNE

LABORATORY,

HAMPSTEAD, LONDON, N.W.

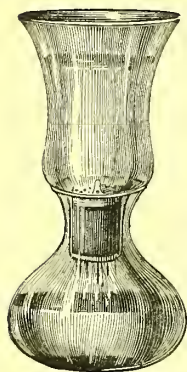
MAWSON'S FILTERS.

(IMPROVED PATENT.)

SPECIALLY SUITED TO WARM COUNTRIES.

THE ONLY FILTERS PERFECTED BY THE AID OF EXACT ANALYSIS.

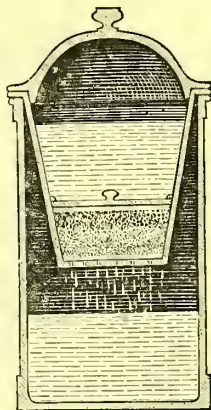
EARTHENWARE.



Plain Glass .. 4/6
Do., with handle 5/6
(including recharges)



Size— 1 2 3 4 6 gallon.
Price— 14/6 21/ 27/ 35/ 50/ each.



White, decorated 1 2 4
Earthenware.. 35/ 45/ 65/



Engraved Glass .. 6/6
Do., with handle .. 7/6
(including recharges)

THE ABOVE ARE RETAIL PRICES.

SIMPLE, SAFE, EFFICIENT, EASILY & ECONOMICALLY RENEWED.

Proprietors—**MAWSON, SWAN & WEDDELL, NEWCASTLE-ON-TYNE.**

WHOLESALE AGENTS—London: Maw, Son & Thompson; Bentley & Sons; Bourne, Johnson & Latimer; William Toogood; Lynch & Co.; Barclay & Sons. Manchester: Woolley, Sons & Co. Liverpool: Evans, Sons & Co.; J. H. & S. Johnson; Symes & Co. Birmingham: Southall Bros. & Barclay. Glasgow: Glasgow Apothecaries' Co. Belfast: Grattan & Co. Cork: Goulding & Co.

“SULFONAL-RIEDEL”

Which has been awarded a GOLD MEDAL at the Brussels Exhibition.

THE NEW HYPNOTIC.

SULFONAL-RIEDEL TABLETS.

PEPSIN-RIEDEL P.B. & P.G.

METHYLENCHLORIDE, Pure, spec. grav. 1,351.

Manufacturer: J. D. RIEDEL, BERLIN.

TO BE OBTAINED THROUGH WHOLESALE DRUGGISTS.

ACETIC ACID,

Chem. Pure, 30, 33 (P.B.), and up to 95 per cent., and GLACIAL.

Manufactured by the LARGEST MAKERS

VEREIN FÜR CHEMISCHE INDUSTRIE

(Union of Chemical Industries).

Head Office—FRANKFORT-ON-MAIN. 9 Factories.

IODOFORMIUM BITUMINATUM

(Dr. EHRMANN).

IRON REDUCED BY HYDROGEN

IN EVERY PERCENTAGE.

The Speciality of the “CHEMISCHE FABRIK”

OF

Dr. PAUL LOHMANN,

HAMELN, HANOVER.

GLYCERINE, CHEM. PURE,

d. d. 1,260 S.G.

CARBONATE OF MAGNESIA AND
CALCINED MAGNESIA. Lightest and Purest.

SOLE WHOLESALE AGENTS:

R. W. GREEFF & CO., 29 MINING LANE, **LONDON, E.C.**

WYLEYS & CO.

MANUFACTURING CHEMISTS

AND

DRUG GRINDERS.

WAREHOUSES, LABORATORIES, AND DRUG MILLS,
COVENTRY.

WYLEYS' PEARL-COATED PILLS.

All mixing, cutting, rounding, picking, &c., is accomplished with the aid of steam machinery, by which means we attain a uniformity in composition and size such as cannot be equalled by hand-work.

For finish, and general good appearance, they will compare most favourably with any in the market.

WYLEYS' GELATINE-COATED OVAL PILLS.

The only oval gelatine-coated pills of English manufacture in the market.

Our "Prices Current" contains an extensive list of coated pills, showing formulæ and prices, together with a number of TESTIMONIALS. Estimates for private formulæ supplied.

MALTED FOOD

FOR INFANTS & INVALIDS.

PRICES.—In Bulk, 42/- per cwt.; Half-pound Packages, 4/- per doz.; One Pound Packages, 7/6 (subject to Patent Medicine Discount).

GLYCERINE SUPPOSITORIES

(WYLEYS).

FOR USE IN CONSTIPATION.

AS FIRST INTRODUCED BY OURSELVES.

The *Lancet* says our Suppositories are "most useful and convenient additions to the Materia Medica."

The *British Medical Journal*.—"They constitute a very convenient and portable form by which glycerine can be administered into the rectum."

Ordinary (Pessary size) 1s. 6d. dozen.
Small, for Children 9d. "

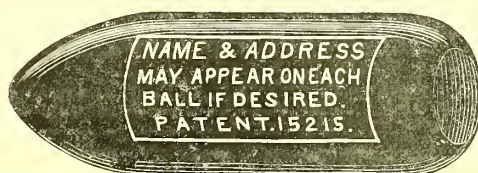
HAMAMELIS AND GLYCERINE SUPPOSITORIES

FOR HÆMORRHOIDS.

Supplied in Slide Boxes, each containing one dozen Suppositories, 1s. per box.

THE DURAPLASTIC COATED HORSE BALL.

(PATENTED.)



"The obvious superiority of these balls over the old paper-wrapped articles will impress the most stolidly conservative of farmers."—*The Chemist and Druggist*, October 27, 1888.

No. 4.—Alterative Balls	...	...	24/	per gross.
" 5.—Astringent Balls	...	...	24/	"
" 12.—Condition Balls	...	...	24/	"
" 6.—Cordial Balls	...	...	24/	"
" 7.—Cough Balls	...	...	24/	"
" 16.—Cough Balls	...	...	27/	"
" 17.—Cough Balls	...	...	27/	"
" 8.—Diuretic Balls	...	...	24/	"
" 9.—Fever Balls	...	...	24/	"
" 1.—Physic Balls	...	...	24/	"
" 2.—Physic Balls	...	...	30/	"
" 3.—Physic Balls	...	...	36/	"
" 18.—Physic Balls	...	...	42/	"
" 19.—Physic Balls	...	...	48/	"
" 15.—Stimulating Balls	...	...	24/	"
" 10.—Tonic Balls	...	...	24/	"
" 11.—Tonic Balls	...	...	20/	"
" 13.—Worm Balls	...	...	30/	"
" 14.—Worm Balls	...	...	60/	"

PRIVATE FORMULÆ.

WYLEYS & Co. will be glad to prepare Patent Duraplastic Balls from private recipes.

"CUTTING COUNTERACTED."

MOONSEED BITTERS brings FULL PRICES.

WHY?

Because every one who retails Moonseed Bitters has to sign an Agreement or Contract in the following terms:—



MOONSEED BITTERS.

Above is Facsimile of
THE WRAPPER LABEL
of the 2/9 size.
It is also sold at 4/6.

MOONSEED OINTMENT.

Retails at 1/1½, 2/9, 4/6 per box.

Memorandum of Agreement made this.....day of..... 1889, between A. E. POWELL & COMPANY, of Swindon in the County of Wilts, Proprietors of the Moonseed Bitters and Moonseed Ointment (hereinafter called the "Vendors"), of the one part and of (hereinafter called "the Purchasers"), of the other part.

Whereby it is mutually agreed between the said parties hereto as follows:—

In consideration of the Vendors selling to and supplying the Purchasers with Moonseed Bitters, Moonseed Ointment, and other preparations manufactured and sold by them (hereinafter termed "the Goods") at their usual prices, the Purchasers will observe and perform the following terms and conditions:—

1. The Purchasers to sell the Goods retail for full printed prices only, and for each and every Bottle or Box of Moonseed Bitters, Ointment, or Pills sold by him or them at any less price, without the written consent of the Vendors, the Purchasers shall pay to the Vendors the Sum of Twenty Shillings in the nature of a penalty, to be recoverable as ascertained liquidated damages.

2. The Purchasers not to supply any Wholesale House nor to sell the Goods wholesale to any Chemist or Druggist or Medicine Vendor who will not previously enter into an Agreement to retail the same at prices in accordance with the preceding Clause No. 1 of these presents.

All Purchasers who have signed a similar form of Agreement to the foregoing will be supplied upon the Vendors' usual trade terms, but those Purchasers who do not sign a similar form of Agreement to be supplied upon the following terms only, namely:—RETAIL, 4s. 5d. for each and every 4s. 6d. Box or Bottle, 2s. 8d. for each and every 2s. 9d. Box or Bottle, and 1s. 0½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. WHOLESALE, 4s. 4d. for each and every 4s. 6d. Box and Bottle, 2s. 7d. for each and every 2s. 9d. Box or Bottle, and 11½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. This Agreement and the terms and conditions herein contained to remain in full force and virtue for the term of 7 years from the first day of March, 1889.

As witness the hands of the said parties hereto the day and year first above written.

We call attention to the important steps which we have taken to prevent our specialities being retailed at less than the advertised prices, and we ask the co-operation of the Trade in maintaining the integrity of the scheme whereby the sale of our preparations may always be retained by the legitimate trade. We will not only endeavour, by all means in our power, to prevent the advertised prices being "Cut," but will give Chemists every assistance and facility for making this a large as well as a paying business.

Please write for Terms and Form of Agreement. NOTE that we allow retailers of Moonseed Bitters 2s. 6d. per thousand for the Distribution of Pamphlets. All Goods are sent Carriage Paid for Cash in the United Kingdom.

A. E. POWELL & CO., SWINDON.

IMPORTANT NOTICE

PLEASE OBSERVE that, as the leading Wholesale Houses have now signed our contract, we no longer pay carriage through Messrs. Edwards & Son or any other house. Our goods being obtainable through these sources we can no longer fill retail orders, and we have to ask respectfully that such orders be entrusted to the Wholesale Houses.

Further, in the course of this week all the Houses who hold stock will receive supplies of our certificate, which is to be sent to the Wholesale Dealer when ordering. Chemists will please make a note of this, and apply to us for the form of agreement, as, if the terms of the certificate are not complied with, the goods are charged on the higher scale—that is to say, the prices charged to "cutters," viz., 4/5, 2/8, and 1/0½ per box or bottle.

We respectfully call the attention of the Drug Trade to the Terms of the Agreement as given on the opposite page, and ask their support in maintaining prices and in extending the profitable sale of the article.

A. E. POWELL & CO.
SWINDON.

**Coca
Coca
Coca
Coca**



**Tablets
Lozenges
Elixir
Tea**

SOLE PROPRIETORS—

**THE FRENCH HYGIENIC SOCIETY OF LONDON, 6 CONDUIT STREET, LONDON, W.
REGENCY STREET,**

whence will be forwarded to any applicant a Pamphlet containing the testimony of eminent British and Foreign Medical Authorities to the invaluable properties of the Coca Preparations, together with the history of the cultivation and employment of the Coca Leaf by the native Peruvians, as also of its introduction into Medical Botany in various countries of Europe during the past three centuries, and of the tentative efforts made to verify and utilise its medicinal properties.

RETAIL PRICES.

Coca Tablets and Lozenges in boxes, **1/-, 2/6, & 4/-** per Box.

Coca Elixir **3/-** Bottle.

Coca Tea in tins of 1 lb. **4/-**, $\frac{1}{2}$ lb. **2/-**, $\frac{1}{4}$ lb. **1/-**.

USUAL WHOLESALE DISCOUNT.

CAN BE OBTAINED FROM ALL WHOLESALE HOUSES.

TOWLE'S CHLORODYNE

In **COUGHS, ASTHMA, BRONCHITIS, INFLUENZA, &c.**, its effects are truly wonderful, immediately relieving the tightness of the Chest, allaying irritation of the Throat, promoting Expectoration, and speedily and effectually subduing the Cough.

It soothes the weary aching of **CONSUMPTION**, relieves the harassing Cough, and often prevents those sleepless nights so trying to the sufferer.

In **CHOLERA, DIARRHŒA, DYSENTERY, &c.**, it has proved itself a most valuable specific, quickly relieving the pain and spasms, and seldom failing to check the disease; for which property, as well as for its value in Sea Sickness (for which it is the best remedy known) it should be an indispensable article in every emigrant's outfit.

TESTIMONIALS.

"Superior to every other I have tried."
F. H. GREEN, M.R.O.S.,
Rochdale Dispensary.

"Peculiarly serviceable in Bronchial, Spasmodic, and Neuralgic Affections."
ALFRED ASPLAND, F.R.O.S.,
Consulting Surgeon to Ashton Infirmary.

"I have used it largely in Spasmodic and Painful Affections, Bronchitis, and Neuralgia. It has the property of being readily combinable in ordinary prescriptions—an advantage over all similar preparations."
R. TRAFFORD WHITEHEAD, M.R.O.S.

A Surgeon writes:—"In Diarrhœa, Colic, Ague, Spasms, I have found it relieve more pain and cause more joy than any other article that can be named. Has proved itself a specific against sea-sickness."

Island Bridge, Dublin.

"I am pleased to say that although I have not finished a quarter of the bottle (2s. 9d.) the pain has left my chest, and the cough is almost well."—J. BROWN.

Immediately Relieves

**COUGHS,
CONSUMPTION,
ASTHMA,
BRONCHITIS,
TIC,
SPASMS,
HYSTERIA,
DIARRHŒA,
DYSENTERY,
CHOLERA,
CRAMP, AGUE,
Sea-Sickness, &c.**

REVISED PRICE LIST.

	Retail	Per doz
	s. d.	£ s. d.
Towle's Chlorodyne	1 1½	0 8 6
Ditto	2 9	1 3 0
Ditto (3 fluid oz.)	4 6	1 16 0
Ditto (8 ")	11 0	4 13 0
Liq. Chlorodyni (Original and only Genuine) ½ lb. ..		1 10 0
Ditto ditto ½ lb. ..		2 14 0
Ditto ditto 1 lb. ..		4 16 0
Winchester Quarts (6 lb.) 7/6 per lb., bottles free.		
Towle's Antibilious Pills	1 1½	0 8 6
Ditto	2 9	1 3 0
Towle's Chlorodyne Lozenges }	0 7½	0 6 3
Ditto Jujubea }	1 1½	0 8 8
Ditto in bulk, bottles free, containing 1 lb., 2/9 each.		
Ditto ditto 1 lb. 10 oz., 4/6 ..		
Ditto ditto 4 lb., 10/- ..		
N.B.—The Commissioners will allow them to be sold by the retailers without further duty, provided they are simply wrapped in paper, and not enclosed in a box, bottle, or packet.		
Thornton's Celebrated Toilet Cream	1 0	0 9 0
Ditto	1 6	0 14 0
Ditto	2 8	1 4 9
Amboline (Registered Trade Mark)	2 6	1 4 0
The Thornton (Red) Lotion (Stamped)	2 6	1 4 0
Thornton's Paragon Hair Wash	1 0	0 9 0
Ditto	2 6	1 4 0

Posters, Bills, and Showcards on application.

£5 worth (assorted or otherwise) Carriage Paid.

7 lb. Lozenges and upwards stamped with Chemists own name, free of charge.

A. P. TOWLE & SON

75 BACK PICCADILLY,

MANCHESTER, December, 1888.

WITHOUT A RIVAL!

From the time Medicine was first discovered by the Ancients down to the present none ever made such progress as

BEECHAM'S PILLS.



They stand without a rival, and have by far the largest sale of any Patent Medicine in the World. This is a fact which every business man is bound to admit.

All Foreign Dealers will find BEECHAM'S PILLS the most Saleable Medicine in the Market.

The health-restoring and life-giving properties of these Pills are such as to increase their demand every year.

The words "BEECHAM'S PILLS, SAINT HELENS," are on the Government Stamp affixed to each box.

Prepared only and sold by the Proprietor, THOMAS BEECHAM, ST. HELENS, LANCASHIRE, ENGLAND, in boxes at 1s. 1½d. and 2s. 9d. each, with full instructions for use.

BANNER'S LIVERPOOL SUMMER SEASON SPECIALITIES.

GRANULAR EFFERVESCENT CITRATE OF MAGNESIA.
DALMATIAN INSECT POWDER
(FROM CLOSED FLOWERS).

1-cwt. Case of Tins Mag. Cit. Gran. Effer. at 6½d. per lb. | 28-lb. Tins Mag. Cit. Gran. Effer. at 7d. per lb.

GREAT REDUCTION!

NEW AMERICAN OIL OF PEPPER-

MINT, NOT deprived of its Menthol, 8s. 9d. per lb.
An original 22-oz. bottle free by parcel post for 12s. 6d.

8-oz. Capsuled E. I. Mustard Seed Oil, branded "Star of India" on Capsule, bottle ... 8/9 per doz.

4-oz. Capsuled ditto, ditto ... 5/6 " "

28-lb. tins Dalmatian Insect Powder ... 1/2 per lb.

56-lb. tins Chilian Honey ... -/3 " "

10-lb. tins Super Ess. Lemon ... 5/6 " "

7-lb. bottle P. Rhei E. I. Elect ... 3/- " "

56-lb. Bale Senna T.V. ... -/3½ " "

4½-gallon tins finest non-freezing Norwegian

Cod Liver Oil ... 4/6 per gal.

CIRCASSIAN SWEET OIL. — 40-gallon

barrel, bright and clear as COLZA OIL—1s. 6d. per gallon (for Hair Oil, &c.); sample 9-gallon tin for 15s.

40-lb. tin Baseline Petro. Jelly (firmer than Vaseline) ... -/4 per lb.

(Best Ointment and Pomade basis.)

Dozen Pure Menthol Cones, in neat turned wood boxes ... 2/- per doz.

One-Gross case 3d. size "Struck down Dead"

Vermin Killer, with "Poison Register," for 10/6.

GOOD MERCHANTABLE QUALITY GUARANTEED.

E. R. BANNER, DRUG MERCHANT, 56 BOALER STREET, LIVERPOOL.

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CIGARS & CIGARETTES.

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Tobacco, Cigar, & Cigarette
Manufacturers,
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Special Packed Tobaccos
"ROYAL CHARTER"

AND
"UPPER CRUST."

Sold in Packets only.

Those who deal in these Goods, or intend doing so
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Price List.

VALUABLE & INTERESTING TO EVERYBODY. COMPRESSED HOPS.

Best Hops compressed into small parcels of one pound and half-pounds, and sent out in cases containing 30 lbs. each. These Hops are specially selected and compressed for keeping purposes, and will retain their aromatic strength for a considerable time.

They are introduced to the Public to enable them to make their own BITTERS, YEAST, HOME BREWING, and numerous other purposes. Full particulars given on each packet.

P.S.—Chemists will naturally see the great advantage in making their own Bitters from the Pure Hop itself.

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Specially Packed by **A. WILKINSON & SONS, 37 CANNING PLACE, LIVERPOOL.**

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GRAN. EFFER. BISMUTH AND PEPSINE
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GRAN. EFFER. IRON, QUININE AND PEPSINE
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AND ALL OTHER GRANULAR PREPARATIONS.

Now prepared only by **CURTIS & COMPANY, 48 Baker Street, Portman Square, LONDON, W.**

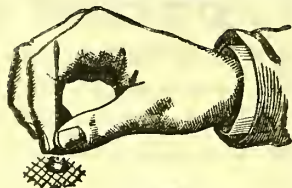
GRANULAR EFFERVESCENT ANTIPYRIN.

(Each Teaspoonful contains 8 grains.)

Introduced by Curtis & Co.

See that this preparation bears our name.

Trade Mark.



Registered.

THE
ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH,
12 Pall Mall East, London, S.W.

SOLE AGENTS FOR DR. WARLONMONT'S CALF VACCINE.

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.
HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Tubes, two-thirds full, 1s. 8d. each; Tubes one-third full and Lancet-charged Points, 1s. each; Pin-points, 1s. 1d. each. Eighteen charged Small Points, 5s. Tubes, two-thirds full (same as those mentioned above, but without source), in quantities for export, 25 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccine Ejectors 1s. 3d. each, including postage. Vaccinations by appointment. P.O.O.'s (including postage, and crossed London and Westminster Bank), with orders, payable to
EDWARD DARKE, Secretary

Office hours, 10 to 4; Saturdays 10 to 2.

**DR. RENNER'S ESTABLISHMENT FOR
VACCINATION WITH CALF LYMPH,**
186 (late 228) Marylebone Road, London, N.W.

VACCINATION FROM THE CALF DAILY FROM 11 TO 12 O'CLOCK.

Reduced price of Calf Lymph (daily fresh).

Tubes	Large	...	...	2s. each, or 3 for	5s. 6d.
	Small	...	...	1s. " "	2s. 9d.
Points	Large	...	...	1s. " "	2s. 6d.
	Small	...	...	9d. " "	2s.
Squares	...	...	...	2s. 6d. each.	

Registered Telegraphic Address—"VACCINE LONDON."

Sent on receipt of remittance addressed to the Manager of the Establishment. Discount to the Trade.

"The Pills of McKesson & Robbins are quite of the highest class of merit, in respect to the method, in respect to the materials, and in respect to results."—*British Medical Journal*, October, 1881.

A TASTELESS TONIC LAXATIVE GRANULE.

EXACT
SIZE



McK. & R.
PILLS.

Sample Bottles containing 25 Pills, 7s. per doz.; Bottles containing 100 Pills, 24s. per doz.

Formula, Aloin, Strychnine, and Belladonna.—McK. & R. PILLS.

Aloin, 1-5 gr. | Strychnina, 1-60 gr. | Ext. Belladonnæ, 1-8 gr.

DOSE.—One pill three times a day. Morning, noon, and night. Where a painless peristaltic action is desired by the aged or female patient, one pill may be taken every night or second night at bedtime, as directed by medical attendant.

BITTER AND NAUSEOUS DRUGS IN PALATABLE GRANULES.

Calcium Sulphide ..	$\frac{1}{2}$ gr.	Ergotin, equal ..	3ss.	Ext. 3 gr.	Morphine, Muriate	$\frac{1}{2}$ gr.	Quinine, Bi-Sulphate ..	$\frac{1}{2}$ gr.	Rhubarb Comp. B.P. ...	5 gr.
" "	$\frac{1}{2}$ gr.	Euonymin		2 gr.	" "	$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.	Salicylic Acid	2 gr.
" "	$\frac{1}{2}$ gr.	Iodoform		1 gr.	Opium, Powdered	$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.	" "	5 gr.
" "	$\frac{1}{2}$ gr.	" "		and Iron ..	Podophyllin	$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.
Cannabis Indica Ext.	$\frac{1}{2}$ gr.	Ipecac. Powdered		$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.
" "	$\frac{1}{2}$ gr.	Mercury Bin-Iodide ..		$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.
Cascara Sagrada Ext.	$\frac{1}{2}$ gr.	" "		Proto-Iodide ..	" "	$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.
		" "		" "	Comp.		" "	$\frac{1}{2}$ gr.	" "	$\frac{1}{2}$ gr.

In this form the ingredients are not only perfectly preserved, but do not affect the teeth, or offend the palate, and, further, can be conveniently kept out of sight by those who object to be regarded as invalids. Complete list mailed free on application

PLEASE SPECIFY McK. and R. PILLS.

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C. R. HARKER, STAGG & MORGAN

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MANUFACTURING CHEMISTS

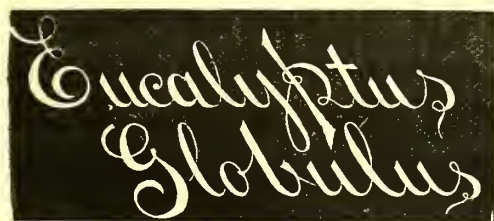
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PHARMACEUTICAL EXTRACTS—FLUID AND SOLID.

STANDARDIZED AND GUARANTEED DRUGS AND PREPARATIONS.

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We distil pure oil of Eucalyptus **GLOBULUS** as a by-product in the manufacture of our Eucalyptus Boiler Fluid, and are, therefore, enabled to place it in quantities at a lower rate than has heretofore been asked for it.

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41 REDCROSS STREET, LIVERPOOL;
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71 HUDSON STREET, NEW YORK.

TARTARIC ACID

Technically Pure, in Crystals and Powder, of best quality only; also Chemically Pure;
OF THE

Nienburger Weinsteinsäurefabrik

IN NIENBURG a. d. WESER.

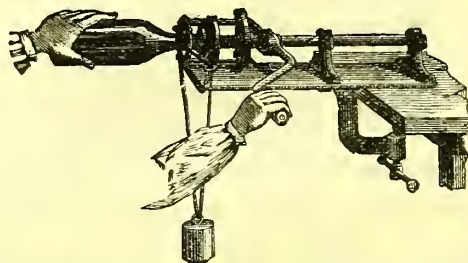
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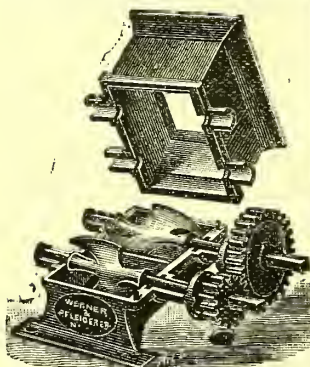
NEW CAPSULING MACHINE

The only Machine
which leaves no crease
or pleat on the
Capsule.



Can be fixed to any
Counter.
A single pull of the lever
is sufficient
to fix the Capsule.

Patentee—**C. MELIN**, 37 Crutched Friars, LONDON, E.C.



Size 3, Type I, for 1-lb. Mass.

THE "UNIVERSAL" KNEADING AND MIXING MACHINE FOR PILL MASS MAKING,

ALSO FOR
Horse Balls, Tooth Pastes, Ointments, Soaps, Powders, and for
general Mixing and Incorporating.

REPLACES WITH ADVANTAGE ALL OTHER APPLIANCES FOR THESE PURPOSES.

Made in various sizes, to do from $\frac{1}{2}$ lb. up to 1 ton at a time.

WERNER & PFLEIDERER, 86 Upper Ground St., LONDON, S.E.
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FLATNESS OF TASTE

SO COMMON IN FILTERED WATER,

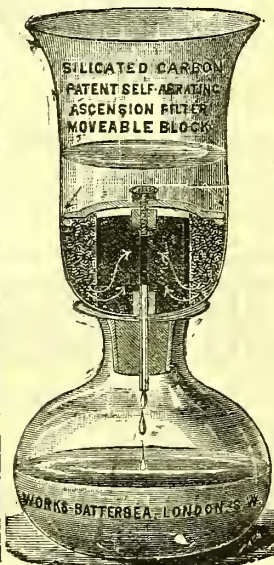
OBVIATED

BY USING

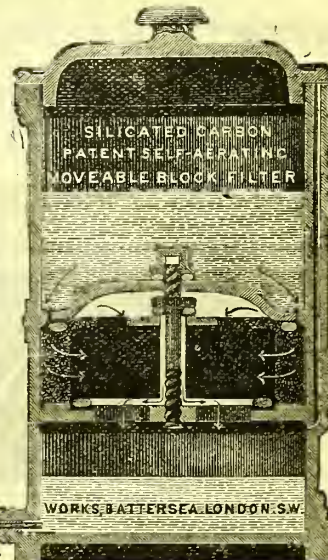
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By means of which the water is Aerated and
Filtered simultaneously, rendering it, even
after boiling, Pure, Bright, and Palatable.

The Silicated Carbon Block can be Instantly
Removed, leaving the whole of the Filter Open
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Glass Table Filters.



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"I have found 145 rats killed in my farm buildings by it."—C. Wilson Offord.  
 "It is the most certain remedy I have ever tried. Little pellets about the size of a pea are put in the rat holes or in their runs. I destroyed over 300 rats from one dressing with it."—C. Cook, Grange Farm, Ellesmere, Salop. It is, without doubt, the best ever introduced. Price 6d., 1s., 2s., and 3s., of Chemists.

SANFORD'S MICE POISON for Houses, Buildings, Corn Stacks, &c. Cannot be excelled. Has given entire satisfaction for the past 24 years. In packets 3d., 6d., 1s., and 2s. each, with directions for use, of SANFORD & SON, Sandy, Beds. Liberal terms to Chemists. Wholesale of Barolay & Son, Sanger & Son, Newbery & Sons, Edwards, and others, London (England).

**PERFUMES, No. 30.****FIFTY KINDS.****9s. for 20 oz., Carriage Paid.***Samples of any kind for 2 stamps.*

When buying, compare my Perfumes with other makers', and buy the best.

**GEORGE DURRANT, HERTFORD.***London Agents—Messrs. BAISS BROS. & CO., Mr. WILLIAM TOOGOOD.***ALBERT'S  
GRASSHOPPER OINTMENT  
AND PILLS.**

1/1, 2/9, 4/6, and 11/ per box. Pills, 1/1 per box.

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Wholesale and Export Druggists before buying elsewhere should apply to

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MONA BOUQUET**

Retail, 1/1, 1/9, & 3/6; Wholesale, 7/12, & 22/6 per doz.  
 This much-admired Perfume (first introduced by the late Joseph Okell) may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Sole Consignee—**THOMAS WEST, 59 and 61 Chester Road, Stretford, Lancashire.**Special Agents—**B. G. LENNON & CO., London, and Port Elizabeth Cape Town, and East London, South Africa.**

GENUINE AND RELIABLE

**HOMŒOPATHIC MEDICINES**

1s. Size Tinctures or Pilules, 3s. 9d. per doz. net cash.

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MANUFACTURERS OF

**BLEACHED AND ABSORBENT WOOLS,***Grey Wool, Coloured Wools, and Jewellers' Sheets.*

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Telegraphic Address—"HAYNES STOCKPORT."

**Critchley's  
Starch Gloss**

Makes starched linen like new. Does not stick to spider-like materials. Once tried always wanted. Used in the Royal Laundries. Sold everywhere, in Packets, 1d., 2d., 3d., and 1s. each. Write for quotations.

Prepared only by  
**CRITCHLEY,  
 T. BLACKBURN, and  
 1 & 3 Australian Avenue,  
 LONDON, E.C.**

**Dunn's**

(Healthful, Useful.)

Certificate of  
Analysis on each tin.**Fruit-Salt**

Manufactured by

**W. G. DUNN & CO.**

21 Mincing Lane, E.C.

Works—Croydon, Surrey.

**Baking Powder****"THE COOK'S BEST FRIEND."***Price List and Sample on application.***LINT.**

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MARK STREET MILLS,

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WHOLESALE DRUGGISTS, &amp;c.,

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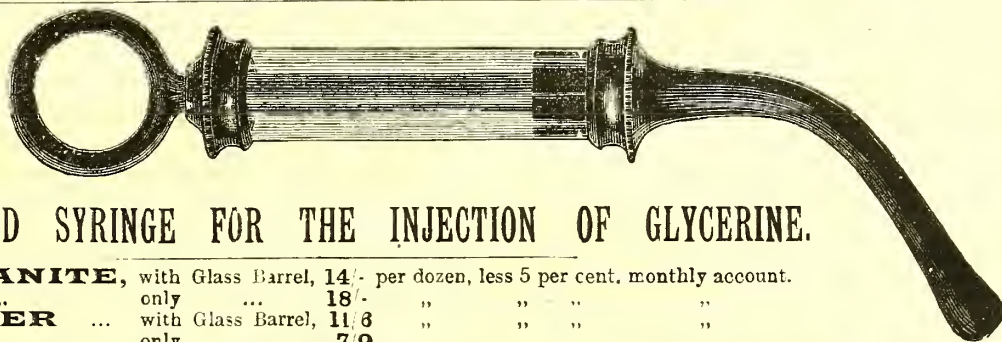
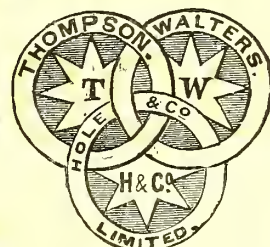
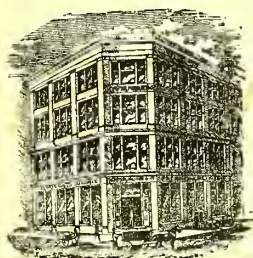
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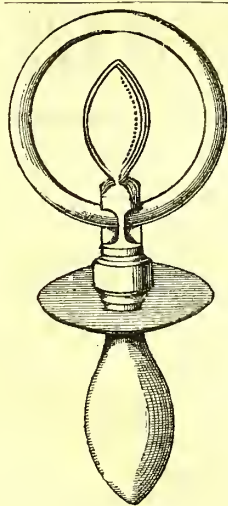
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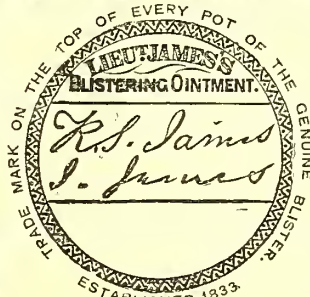
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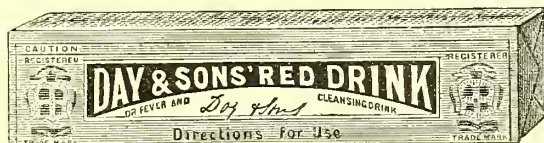
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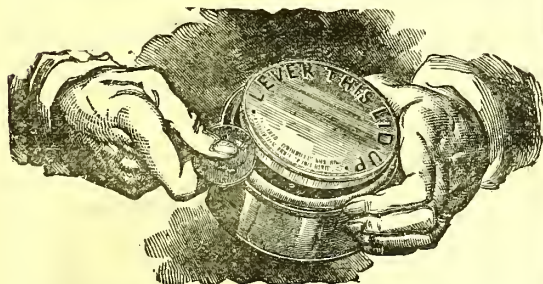
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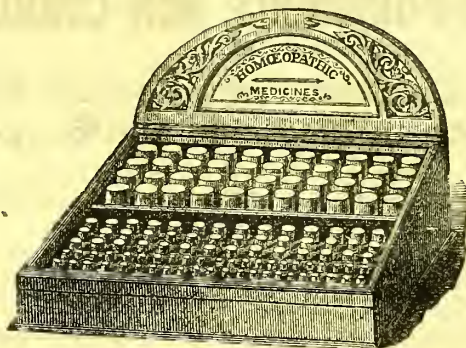
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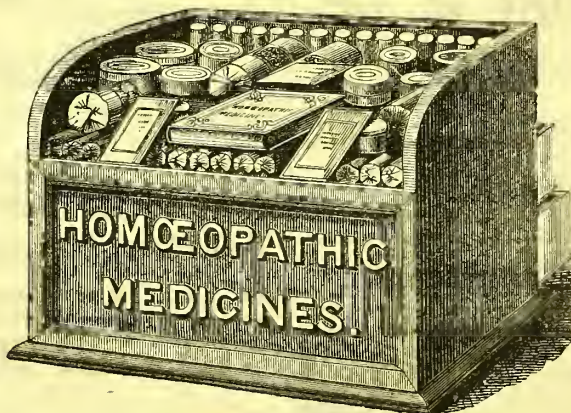
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WITH  
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AND  
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